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IN EPILEPSY... PREREQUISITE FOR PARTICIPATION: THERAPY

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CELONTIN Kapseals (methsuximide, Parke-Davis) 0.3 Gm., bottles of 100.

bibliography: (1) Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, Williams & Wilkins Company, 1956, p. 136. (2) Bray, P. F.: *Pediatrics* **23**:151, 1959. (3) Davidson, D. T., Jr., in Conn, H. F.: Current Therapy 1959, Philadelphia, W. B. Saunders Company, 1959, p. 512. (4) Smith, B., & Forster, F. M.: *Neurology* **4**:137, 1954. (5) Zimmerman, F. T.: *New York J. Med.* **55**:2338, 1955. (6) Lemere, F.: *Northwest Med.* **53**:482, 1954. (7) Perlstein, M. A.: *Pediat. Clin. North America*: **4**:1079 (Nov.) 1957. (8) Livingston, S., & Pouli, L.: *Pediatrics* **19**:614, 1957. (9) Carter, C. H., & Maley, M. C.: *Neurology* 7:483, 1957. (10) Keith, H. M., & Rushton, J. G.: *Proc. Staff Meet. Mayo Clin.* **33**:105, 1958.


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TABLE OF CONTENTS

GUEST EDITORIAL
State-Wide Milk Control—*Mack I. Shanholtz, M.D.* 1
ORIGINAL ARTICLES
George Frederick Handel—A Genius in Darkness—*G. E. Arrington, Jr., M.D.* 2
Medical Management of Bleeding Peptic Ulceration—*Marion L. Rice, Jr., M.D.* 11
The Corticosteroids in Obstetrics and Gynecology—*Kenneth R. Baldwin, M.D.* 16
Re-evaluation of Inguinal Herniorrhaphy in the Infant and Child—*Charles E. Davis, Jr., M.D.* 20
The Treatment of Angina Pectoris with Marplan (Ro 5-0831/1)—*Nathan Bloom, M.D.* 23
Cystosarcoma Phyllodes—*Maurice A. Michael, M.D.* 25
Pyloric Obstruction Due to Biliary Calculus—*Noland M. Canter, Jr., M.D.*, and *Frank W. Gearing, Jr., M.D.* 28
Lead Poisoning—*Sidney Kaye, Ph.D.* 31
CORRESPONDENCE
"Everything is Getting Black", the Death of a Poet—*Nathaniel H. Wooding, M.D.* 33
THE MEDICAL SOCIETY OF VIRGINIA
Social Security Question 34
The Social Security Program—*M. D. Dewberry* 34
Philosophies and Practices—*L. Howard Schriver, M.D.* 38
Question and Answer Session 44
MENTAL HEALTH
Infantile Autism 45
PRE-PAID MEDICAL CARE
Many Questions 47
PUBLIC HEALTH
"Orange Review" Picnic Food Poisoning Outbreak 48
MISCELLANEOUS
Popular View of Doctors Not Accurate 51
Physical Therapy Condensed Bill 52
BOOK ANNOUNCEMENTS 55
WOMAN'S AUXILIARY 57
EDITORIAL
Dr. Barksdale's Gift to the Commonwealth—*Harry J. Warthen, M.D.* 59
Postscript to Guest Editorial 60
SOCIETY ACTIVITIES 61
NEWS NOTES 61
OBITUARY 62

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INDEX TO ADVERTISERS—Page 105

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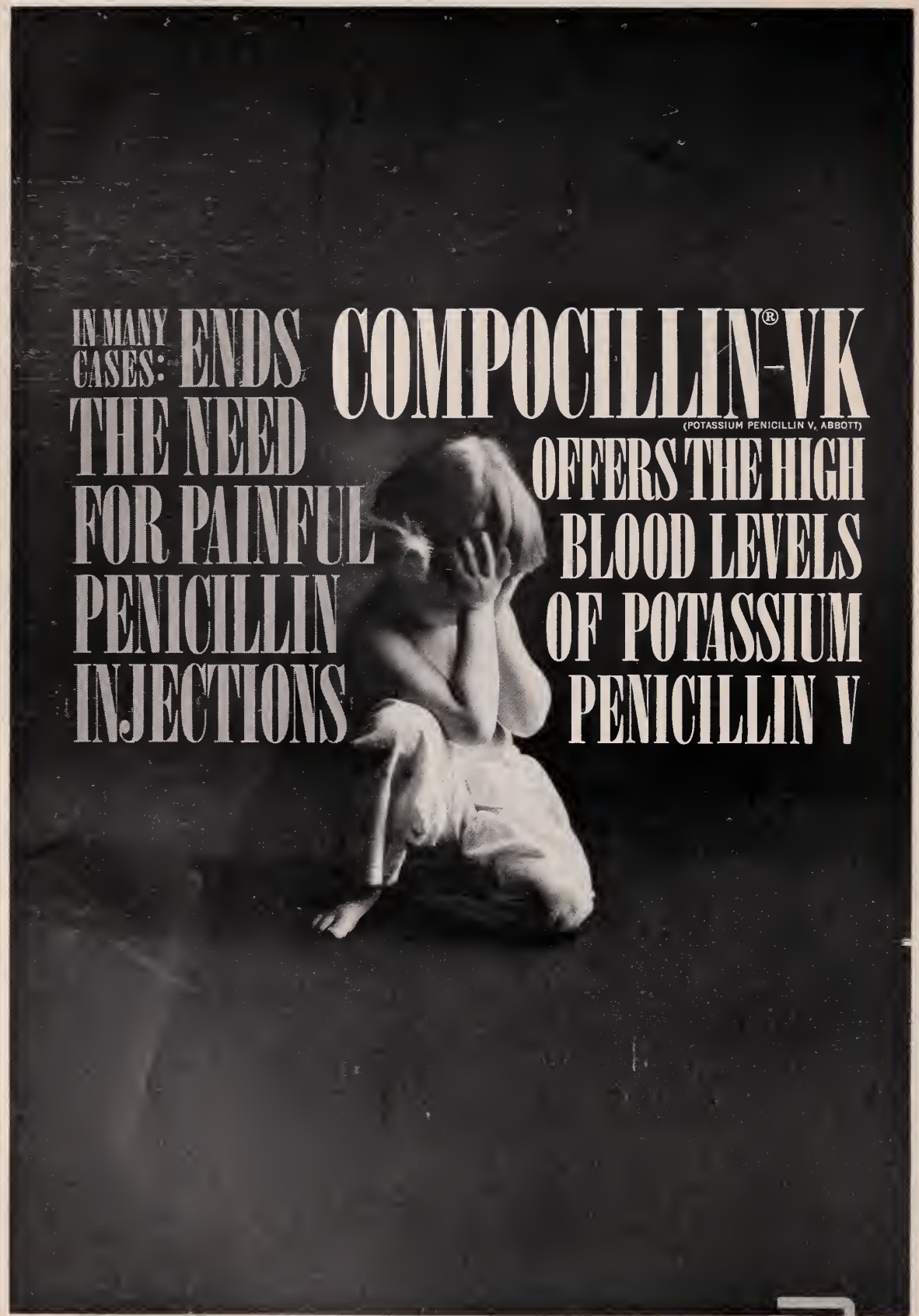
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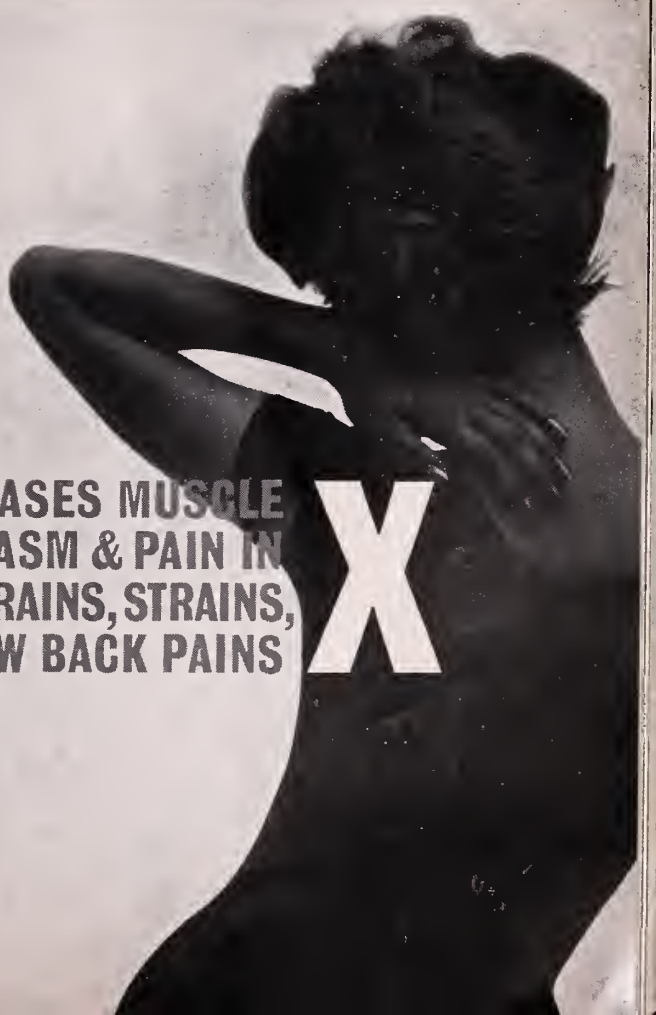
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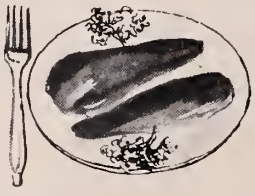
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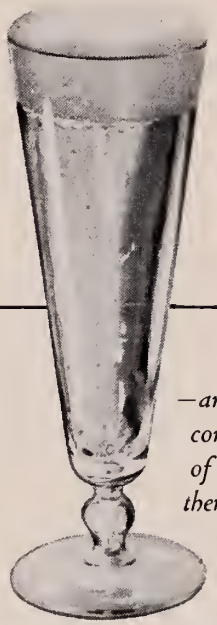
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(Hirsch, H. A. and Finland, M.: Antibacterial Activity of Serum of Normal Subjects after Oral Doses of Demethylchlortetracycline, Chlortetracycline and Oxytetracycline. *New England J. Med.* 260:1099 (May 28) 1959.)

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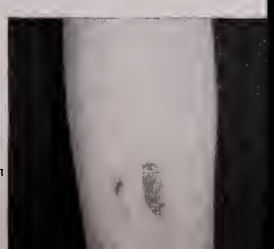
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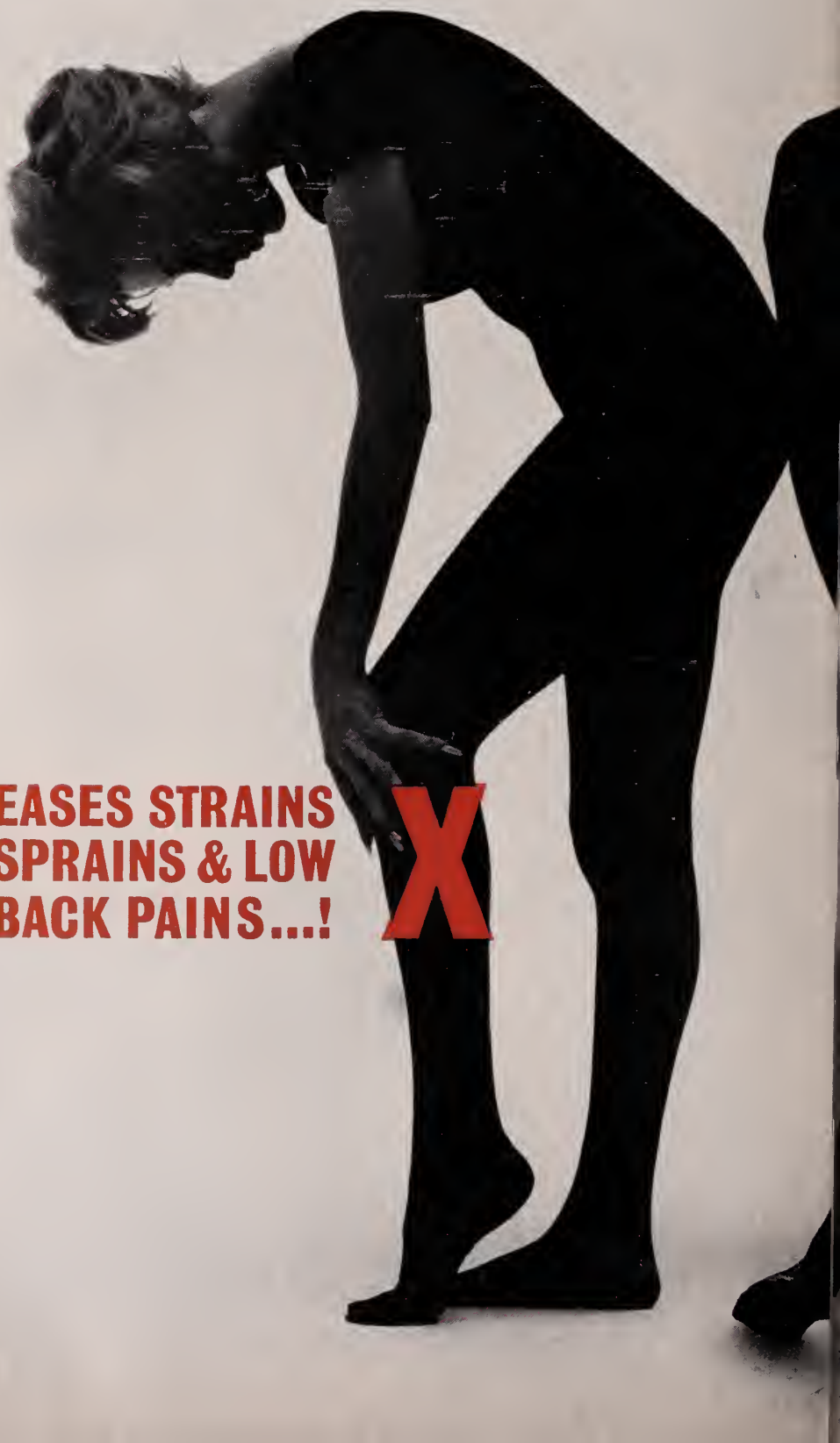
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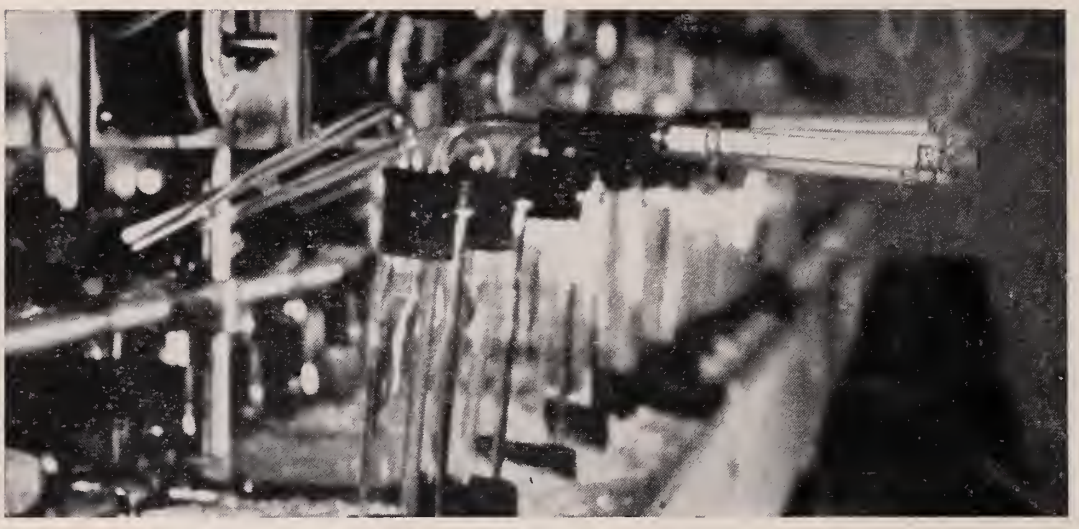
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If you would like the booklet, for your own use, "The Story of Kent," write to: P. Lorillard Company, Research Department, 200 East 42nd Street, New York 17, N. Y.

© 1960, P. Lorillard Co.

Kent filters best

for the flavor you like

A Product of P. Lorillard Company—First with the finest cigarettes—through Lorillard Research!

PHYSICIANS

Enroll Now in these Insurance Plans

Approved by The Medical Society of Virginia

Sometimes the physician neglects his own affairs while giving time and energy to the welfare of others. Undoubtedly that is a principal reason why some members of The Medical Society of Virginia have not availed themselves of the extraordinary advantages offered in the personal insurance programs which have been approved by their own organization. Many members of the Society have taken advantage of the two low-cost group programs and both plans are in effect right now. You simply cannot afford to miss this opportunity for your own protection. Outstanding features of the two separate and distinct group plans include the following:

PLAN NUMBER ONE

Major Hospital Nursing

Provides coverage for you, and your wife to age 70, also dependent, unmarried children between the age of fourteen days and twenty-three years. Protection up to $10,000 within three years of accident or sickness is provided. The same amount is provided for any sickness for which payment has been made that occurs after an interval of twelve months.

The plan pays 100% room and board and 100% of the necessary charges for hospital care and treatment. It pays 75% of special nurse expense in the hospital. You have a choice of three deductible amounts to keep your premiums within the range you prefer.

PLAN NUMBER TWO

Professional Overhead Expense

Pays direct to you the covered expense of maintaining your practice should you be disabled.

The premiums you pay under Plan Number 2 are *tax deductible.* Both plans are underwritten by American Casualty Company of Reading, Pennsylvania. Brochures have been mailed to all members of The Medical Society of Virginia. Please fill out your application and return it promptly.

Unlike most plans, our premiums *do not* increase with age.

(For further information call collect) DIamond 4-500

DAVID A. DYER, *Administrator*
Medical Arts Building
Roanoke, Virginia

Complete local claim service

that's prompt, efficient, satisfactory.



Don't forget that your local American Health Agent . . . by *specializing* in your patient's HOSPITAL, MEDICAL and SURGICAL insurance problems—offers extra services of *special* value to *you* . . .

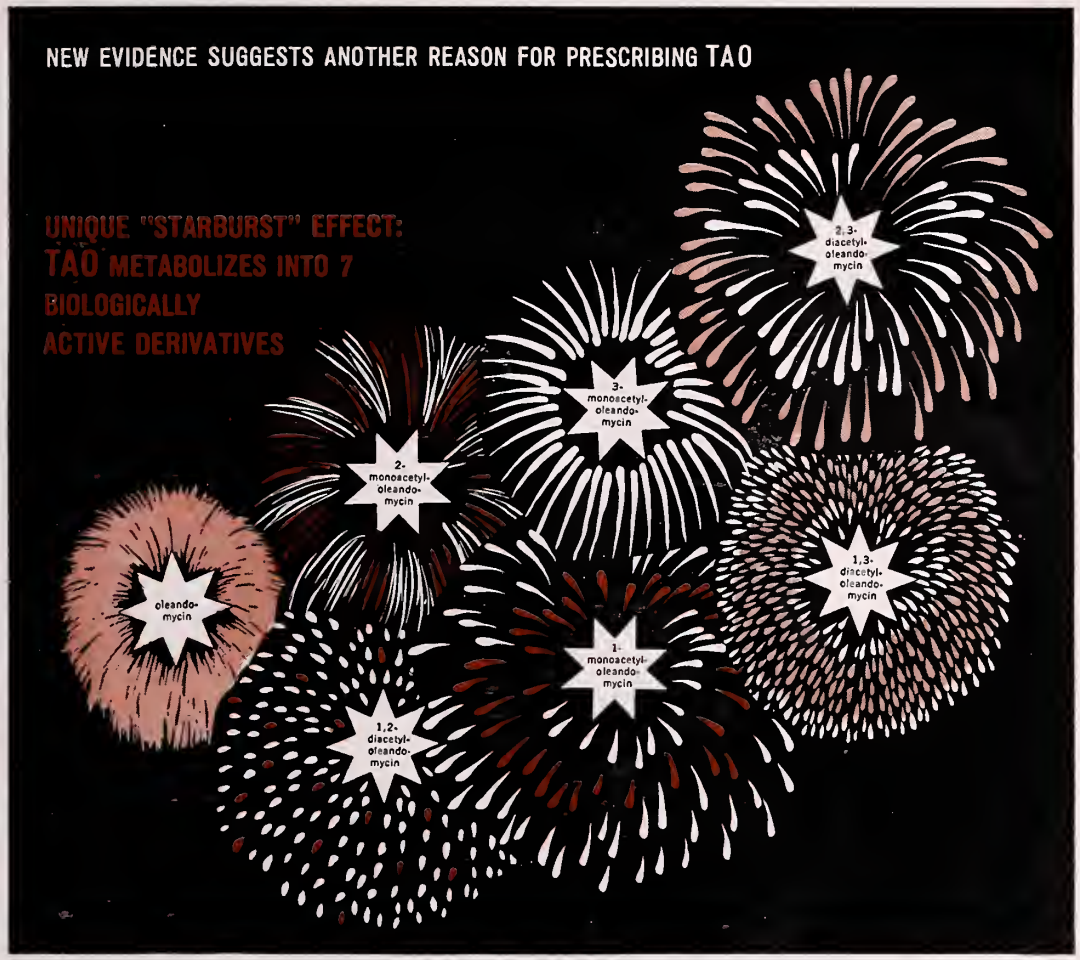
He's a specialist—a career man in his chosen field. He has earned a good reputation *locally*, with efficient service and prompt attention to claims.

Moreover, he appreciates the impact that health insurance can have on the practice of medicine, and wants to co-operate with the local medical profession.

AMERICAN HEALTH
INSURANCE CORPORATION

300 St. Paul Place, Baltimore 2, Maryland

It makes sense to expect special results from a specialist in the field of health insurance.



The impression that TAO is an unusually active antibiotic has steadily gained recognition by impressive clinical performance. Now come reports of in vivo and in vitro biological and biochemical evaluations that show TAO to be indeed unique.[1,2]

TAO differs from other antibiotics in that it is metabolized to multiple active compounds which remain active throughout their presence in the body. These 7 derivatives (in addition to TAO) show activity against common Gram-positive pathogens, including resistant strains of Staph. aureus.

In light of these findings, take another look at TAO performance: • 92% success in published cases of Gram-positive respiratory, skin, soft tissue and genitourinary infection • Effective against 78% of 64 "antibiotic-resistant" epidemic staphylococci. (In the same study, chloramphenicol was active against 52%; erythromycin against only 25%)[3] • No side effects in 94%; infrequent reactions mild and easily reversed • Quickly absorbed • Highly palatable.

Sound reasons to: Start with TAO to end 9 out of 10 common Gram-positive infections.

Supplied: TAO Capsules—250 mg., and 125 mg., bottles of 60. **TAO for Oral Suspension**—125 mg. per tsp. (5 cc.) when reconstituted; unusually palatable cherry flavor; 60 cc. bottle. Prescription only.

Other TAO forms available: TAO Pediatric Drops: flavorful, easy to administer. **TAO®-AC:** TAO analgesic, antihistaminic compound. **TAOMID®:** TAO with triple sulfas. **Intramuscular or Intravenous:** in clinical emergencies. Prescription only.

1. English, A. R., and McBride, T. J.: Proc. Soc. Exper. Biol. & Med. 100:880 (Apr.) 1959. 2. Celmer, W. D.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 277. 3. English, A. R., and Fink, F. C.: Antibiotics & Chemother. 8:420 (Aug.) 1958.

designed for superior control of common Gram-positive infections

TAO®

(triacetyloleandomycin)

Capsules/Oral Suspension



Rx PFIZER

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being

This is Panalba performance...





in sinusitis

. . . into a mixed culture of the four organisms commonly involved in sinusitis . . . *Str. hemolyticus, D. pneumoniae, H. influenzae* and *Staph. aureus* (in this case a resistant strain) . . . we introduce the five most frequently used antibiotics.

Twenty-four hours later (in this greatly enlarged photograph), note that only *one* of the five leading antibiotics has stopped *all* the organisms, including the resistant staph! This is Panalba.

In your next patient with sinusitis . . . in *all* your patients with potentially-serious infections . . . provide this extra protection with your prescription:

Dosage—1 or 2 capsules 3 or 4 times a day.
Supplied—Capsules containing Panmycin phosphate equivalent to 250 mg. tetracycline hydrochloride, and 125 mg. Albamycin as novobiocin sodium, in bottles of 16 and 100.
Now available: **new Panalba Half-Strength Capsules in bottles of 16 and 100.**

Panalba*

(Panmycin* Phosphate plus Albamycin*)

The broad-spectrum antibiotic of *first* resort



Upjohn The Upjohn Company Kalamazoo, Michigan

*TRADEMARK, REG. U. S. PAT. OFF.

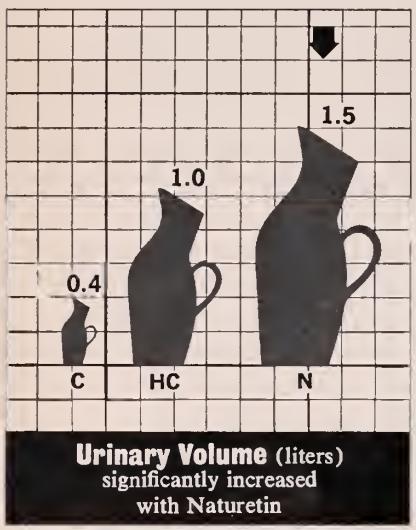
more closely approaches the ideal diuretic

Naturētin

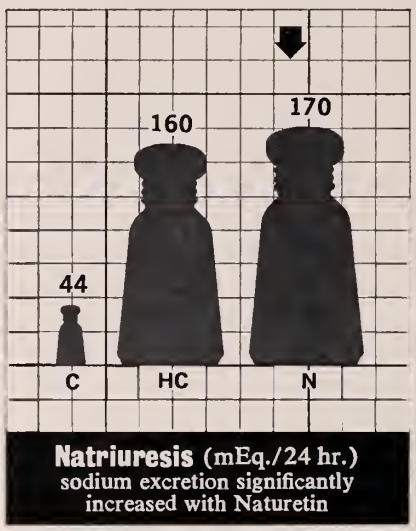
Squibb Benzydroflumethiazide

"When compared to other members of this heterocyclic group of compounds, this drug [NATURETIN] shows a significantly increased natriuresis and decreased loss of potassium and bicarbonate. In this respect it more closely approaches a natural or 'ideal diuretic.' It is effective upon continuous administration and causes no significant serum biochemical changes. It is effective in a wide variety of edematous and hypertensive states and represents a significant advance in diuretic therapy." *Ford, R.V.: Pharmacological observations on a more potent benzothiadiazine diuretic; accepted for publication by the American Heart Journal.*

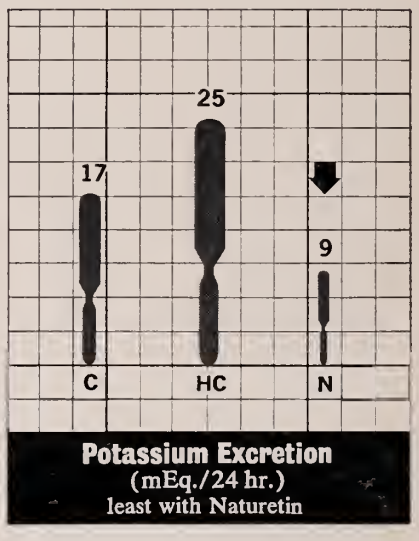
Comparison of electrolyte excretion pattern for the 24 hours following typical doses of chlorothiazide, hydrochlorothiazide, and Naturetin[1]



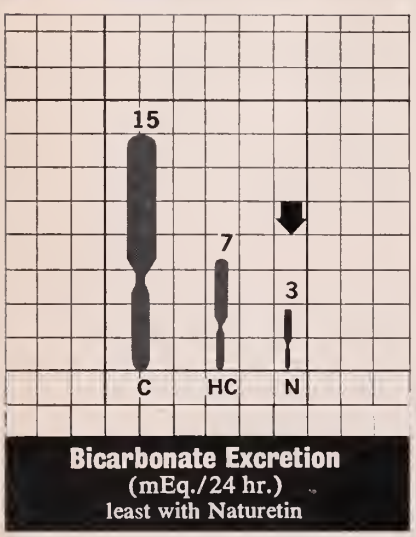
Urinary Volume (liters) significantly increased with Naturetin



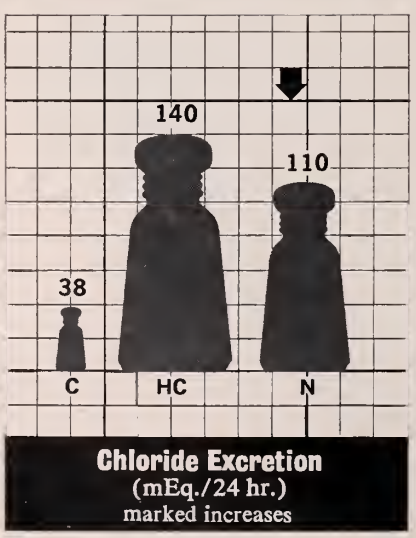
Natriuresis (mEq./24 hr.) sodium excretion significantly increased with Naturetin



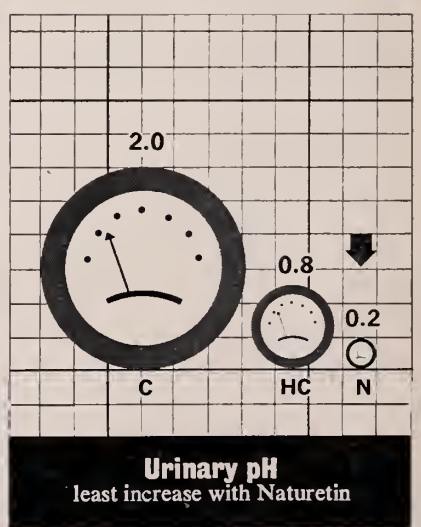
Potassium Excretion (mEq./24 hr.) least with Naturetin



Bicarbonate Excretion (mEq./24 hr.) least with Naturetin



Chloride Excretion (mEq./24 hr.) marked increases



Urinary pH least increase with Naturetin

Typical Doses: Chlorothiazide – 1,000 mg.; Hydrochlorothiazide – 50 mg.; Naturetin (Benzydroflumethiazide) – 5 mg.

1. Adapted from: Ford, R. V. Squibb Clin. Res. Notes 2:1 (Dec.) 1959.

A single 5 mg. tablet once a day provides all these advantages[2]

- prolonged action — in excess of 18 hours
- convenient once-a-day dosage
- low daily dosage — more economical for the patient
- no significant alteration in normal electrolyte excretion pattern
- repetitively effective as a diuretic and antihypertensive
- greater potency mg. for mg.—more than 100 times as potent as chlorothiazide
- potency maintained with continued administration
- low toxicity — few side effects — low salt diets not necessary
- comparative studies with chlorothiazide, hydrochlorothiazide, and Naturetin disclose that smallest doses of Naturetin produce greater weight loss per day
- in hypertension, Naturetin, alone or in combination with other antihypertensives, produces significant decreases in mean blood pressure and other favorable clinical effects
- purpura and agranulocytosis not observed
- allergic reactions rarely observed

[2]Reports (1959) to the Squibb Institute for Medical Research.

Naturētin —*Indications:* in control of edema when diuresis is required, in congestive heart failure, in the premenstrual syndrome, nephrosis and nephritis, cirrhosis with ascites, edema induced by drugs (certain steroids); in the management of hypertension, used alone, combined with Raudixin (Squibb Rauwolfia Serpentina Whole Root), or with other antihypertensive drugs, such as ganglionic blocking agents.

Contraindications: none, except in complete renal shutdown.

Precautions: when Naturetin is added to an antihypertensive regimen including hydralazine, veratrum, and/or ganglionic blocking agents, immediate reduction must be made in the dosage for all preparations; the dosage for ganglionic blocking agents must be decreased by 50% to avoid a precipitous drop in blood pressure. This also applies if these hypotensive drugs are added to an established Naturetin regimen . . . in hypochloremic alkalosis with or without hypokalemia . . . in cirrhotic patients or those on digitalis therapy when reductions in serum potassium are noted . . . in diabetic patients or those predisposed to diabetes . . . when increased uric acid concentrations are noted . . . when signs—leg or abdominal cramps, pruritus, paresthesia, rash—suggestive of hypersensitivity, are noted.

Naturētin —*Dosage: in edema,* average dose, 5 mg., once daily, preferably in the morning; to initiate therapy, up to 20 mg., once daily or in divided doses; for maintenance, 2.5 to 5.0 mg., daily in a single dose. *In hypertension:* suggested initial dose, 5 to 20 mg. daily; for maintenance, 2.5 to 15 mg. daily, depending on the individual response of the patient. When Naturetin is added to an antihypertensive regimen with other agents, lower maintenance doses of each drug should be used.

Naturētin —*Supplied:* tablets of 2.5 mg. and 5 mg. (scored).

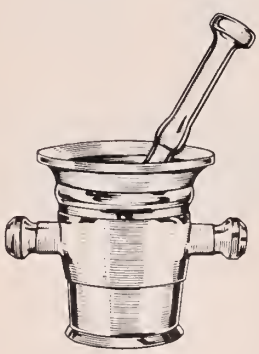
SQUIBB

Squibb Quality—
the Priceless
Ingredient

Rx Naturetin 5mg.
Disp. #30
Sig: 1 each
morning.

'RAUDIXIN'® AND 'NATURETIN' ARE SQUIBB TRADEMARKS.

50 MILLION PRESCRIPTIONS have earned for Peoples Drug Stores the SQUIBB Prescription Award



This achievement reflects physicians' confidence in the integrity of Peoples Drug Stores Prescription Departments and the public's trust in their skilled, registered pharmacists.

PEOPLES SERVICE DRUG STORES



saturation doses – the hard way!

Each of these food portions contains a saturation dose of one of the water-soluble B vitamins or C. The easy way to provide such quantities of these vitamins with speed, safety and economy is to prescribe Allbee with C. Recommended in pregnancy, deficiency states, digestive dysfunction and convalescence.

In each Allbee with C:		As much as:*
Thiamine mononitrate (B_1)	15 mg.	6.9 lbs. of fried bacon
Riboflavin (B_2)	10 mg.	31½ ozs. of liverwurst
Pyridoxine HCl (B_6)	5 mg.	2 lbs. of yellow corn
Nicotinamide	50 mg.	11 ozs. of roasted peanuts
Calcium pantothenate	10 mg.	¼ lb. of fried beef liver
Ascorbic acid (Vitamin C)	**250 mg.**	¾ lb. of cooked broccoli

*These common foods are among the richest sources of B vitamins and ascorbic acid. H.A. Wooster, Jr., Nutritional Data, 2nd Ed., Pittsburgh, 1954.

Allbee® with C

Robins

A. H. ROBINS COMPANY, INC.
RICHMOND 20, VIRGINIA

the beauty of these antitussives:



they help the cough remove its cause

These elegant antitussives comprise a group of significantly superior expectorants from which you may select the formula best suited for your coughing patient.

First of all, they have more in common than mere delectability to eye and palate: they all include *glyceryl guaiacolate*. This remarkable expectorant aids the coughing mechanism by increasing the secretion of Respiratory Tract Fluid,[1] which helps liquefy sputum,[1,3] makes bronchial and tracheal cilia more efficient,[1,2] and acts as a demulcent.[1,3-5] Through its effects, all four expectorants promote the natural purpose of the cough, which is to remove the irritants that cause it.[1,2]

In addition, the Robins antitussive armamentarium provides a choice of widely accepted drugs in various combinations with glyceryl guaiacolate for treating different kinds of coughs and associated symptoms. For antihistaminic effects, there is Dimetane® or prophenpyridamine; for bronchodilation and nasal decongestion, there are sympathomimetic agents; and for suppression of the "too frequent" cough, there is codeine or dihydrocodeinone.

Robitussin®

Each teaspoonful contains:

Glyceryl guaiacolate ..... 100 mg.

Robitussin® A-C

Each teaspoonful contains:

Glyceryl guaiacolate ..... 100 mg.
Prophenpyridamine maleate ... 7.5 mg.
Codeine phosphate ..... 10 mg.
(exempt narcotic)

Dimetane® Expectorant

Each teaspoonful contains:

Parabromdylamine maleate (DIMETANE) ..... 2 mg.
Glyceryl guaiacolate ..... 100 mg.
Phenylephrine HCl, USP ..... 5 mg.
Phenylpropanolamine HCl, NNR ..... 5 mg.

Dimetane® Expectorant-DC

Each teaspoonful contains the Dimetane Expectorant formula *plus* Dihydrocodeinone bitartrate, NF ..... 1.8 mg.
(exempt narcotic)

References: 1. Cass, L. J., and Frederik, W. S.: Am. Pract. & Digest Treat. *2*:844, 1951. 2. Blanchard, K., and Ford, R. A.: Journal-Lancet *74*:443, 1954. 3. Hayes, E. W., and Jacobs, L. S.: Dis. Chest *30*:441, 1956. 4. Blanchard, K., and Ford, R. A.: Rocky Mountain M. J., Vol. 52, No. 3, 1955. 5. Boyd, E. M., and Pearson: Am. J. M. Sc. *211*:602, 1946.

Robins

A. H. ROBINS COMPANY, INC., RICHMOND 20, VIRGINIA

WHEN BLOOD PRESSURE MUST COME DOWN...



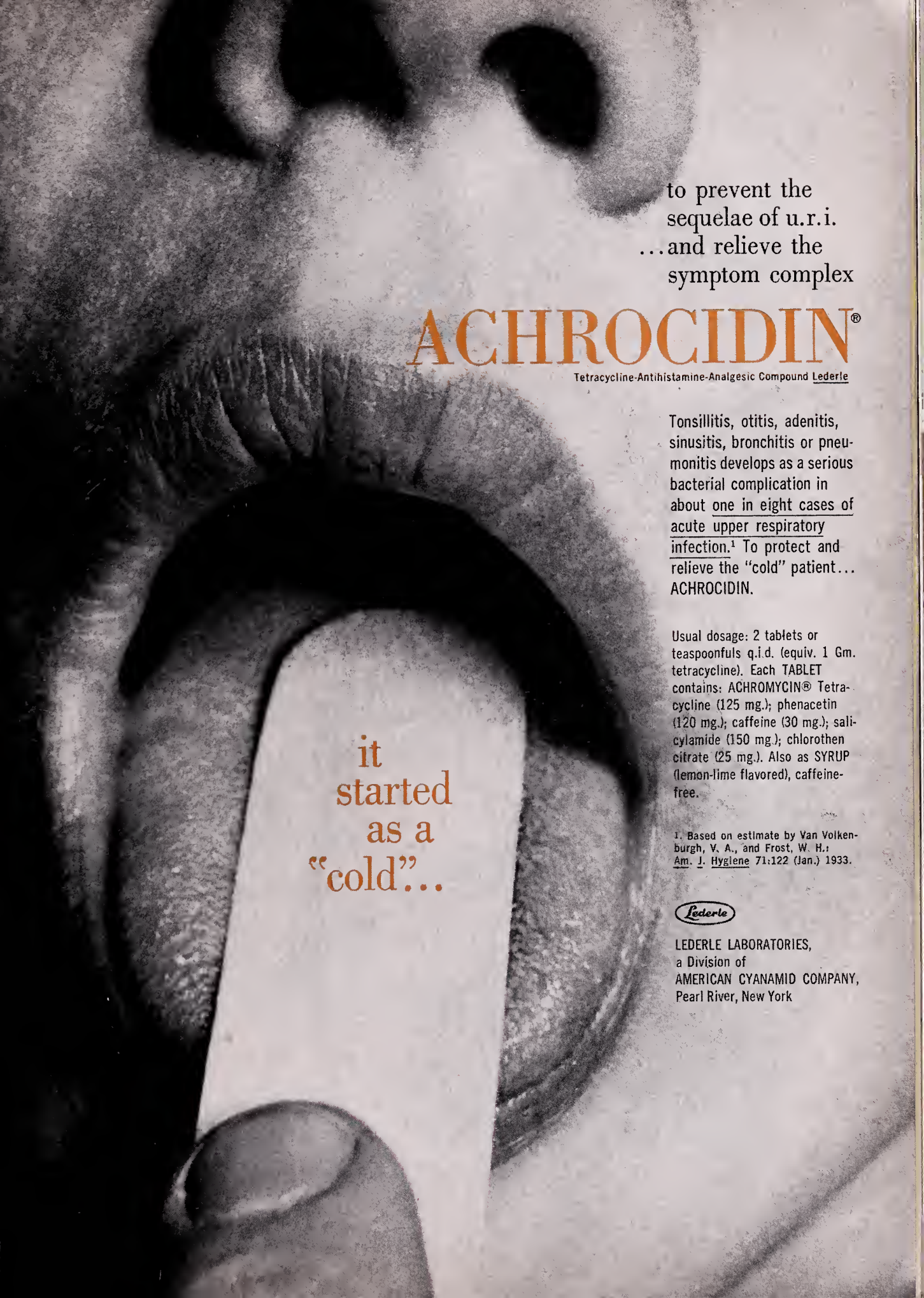
When hypertensive symptoms such as dizziness, headache and fainting are frequent enough and severe enough to interfere with your patient's activity and safety—then it is time to consider the beneficial actions of Serpasil-Apresoline. Both Serpasil and Apresoline lower blood pressure. When the Serpasil-Apresoline combination tablet is prescribed, blood pressure response is even better. In addition, Serpasil contributes favorable calming and heart-slowing effects. Apresoline increases renal blood flow, decreases cerebral vascular resistance and inhibits the actions of humoral pressor agents. Combined with Serpasil, Apresoline is effective at a lower dosage, thus side effects are rarely a serious problem.

SUPPLIED: *Tablets #2* (standard-strength), each containing 0.2 mg. of Serpasil and 50 mg. of Apresoline. *Tablets #1* (half-strength), each containing 0.1 mg. of Serpasil and 25 mg. of Apresoline. *Samples available on request.*

Serpasil®-Apresoline®
hydrochloride
(reserpine and hydralazine hydrochloride CIBA)

2/2640 MR

CIBA SUMMIT, NEW JERSEY



to prevent the
sequelae of u.r.i.
...and relieve the
symptom complex

ACHROCIDIN®

Tetracycline-Antihistamine-Analgesic Compound Lederle

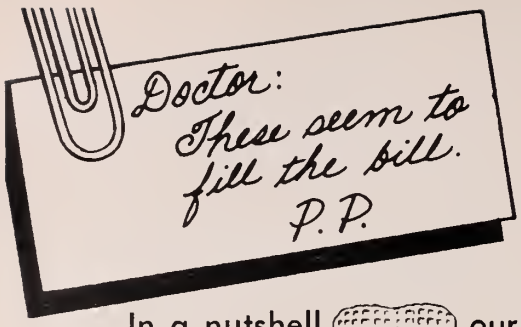
Tonsillitis, otitis, adenitis, sinusitis, bronchitis or pneumonitis develops as a serious bacterial complication in about one in eight cases of acute upper respiratory infection.[1] To protect and relieve the "cold" patient... ACHROCIDIN.

Usual dosage: 2 tablets or teaspoonfuls q.i.d. (equiv. 1 Gm. tetracycline). Each TABLET contains: ACHROMYCIN® Tetracycline (125 mg.); phenacetin (120 mg.); caffeine (30 mg.); salicylamide (150 mg.); chlorothen citrate (25 mg.). Also as SYRUP (lemon-lime flavored), caffeine-free.

1. Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933.

Lederle

LEDERLE LABORATORIES,
a Division of
AMERICAN CYANAMID COMPANY,
Pearl River, New York

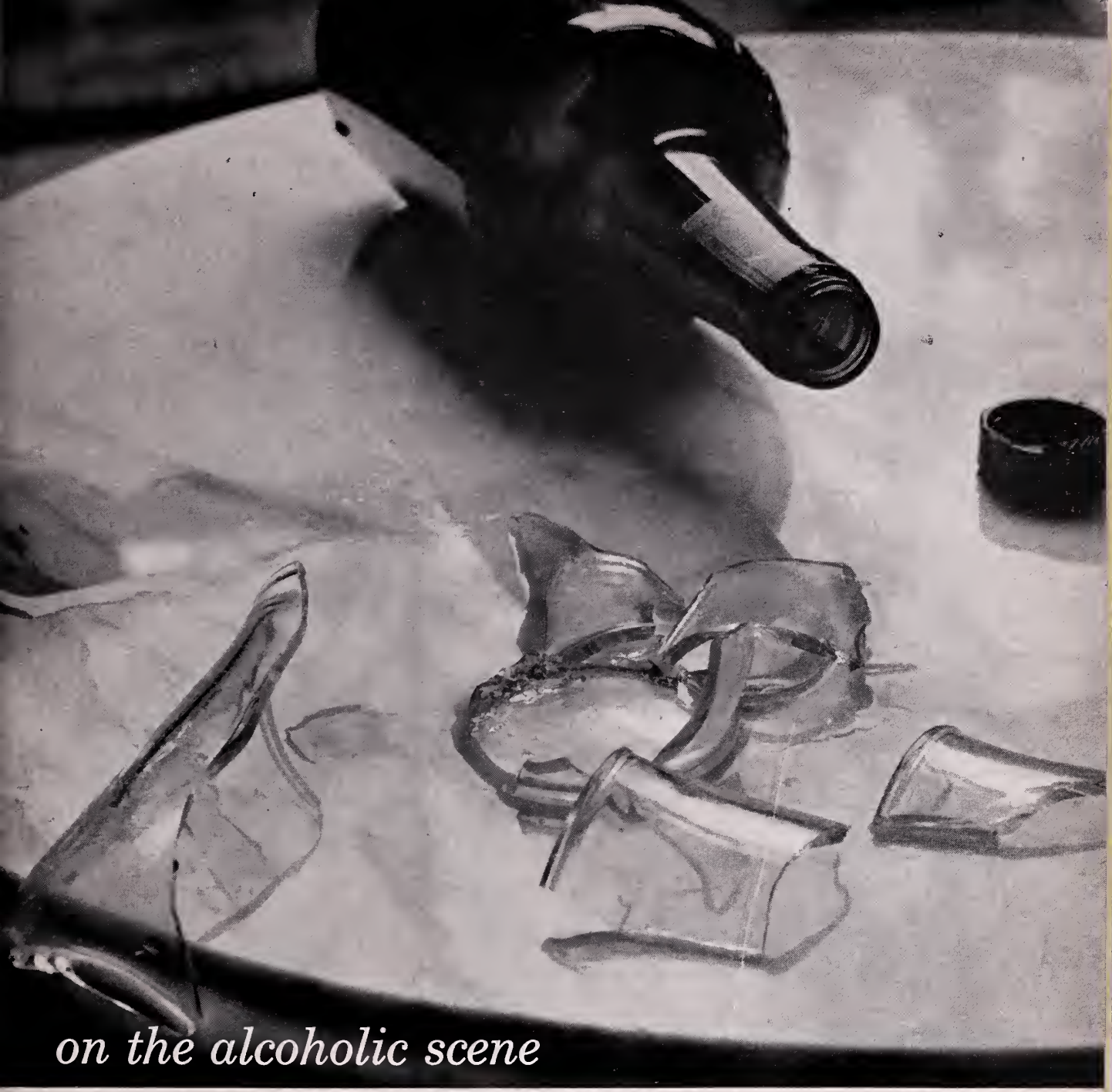


In a nutshell our story is this. We have released a brand new strength of Honey Cillin with a brand new flavor and appearance . . . It is designated . . . Honey Cillin "400" (RED). Each 5cc teaspoonful contains 400,000 units of Penicillin G. Potassium . . . Your patients whether they be tiny tots or "finicky" adults, will enjoy the pleasing taste afforded by the new cherry and honey flavor combination. They will like its sparkling red color . . . they will be delighted by its reasonable price.

The other half of our story is this: Honey Cillin '300' also is still available (300,000 units per 5cc, honey flavor, yellow color) . . . and we would like to remind you, too, of our Trifonacil-250 . . . a most excellent choice when your patient requires penicillin plus triple sulfa pyrimidines in combination with 250,000 units Penicillin G. Potassium strawberry flavor. All three products are packaged in 60cc size bottles.

PHYSICIANS PRODUCTS CO., INC.
PETERSBURG, VIRGINIA

SAMPLES AND LITERATURE GLADLY SENT UPON REQUEST



Vistaril®

hydroxyzine pamoate

quiets agitation

"... an efficient and convenient means of dealing with the problem of acute agitation in alcoholic intoxication . . . important was the absence of noticeable respiratory depression. . . ."

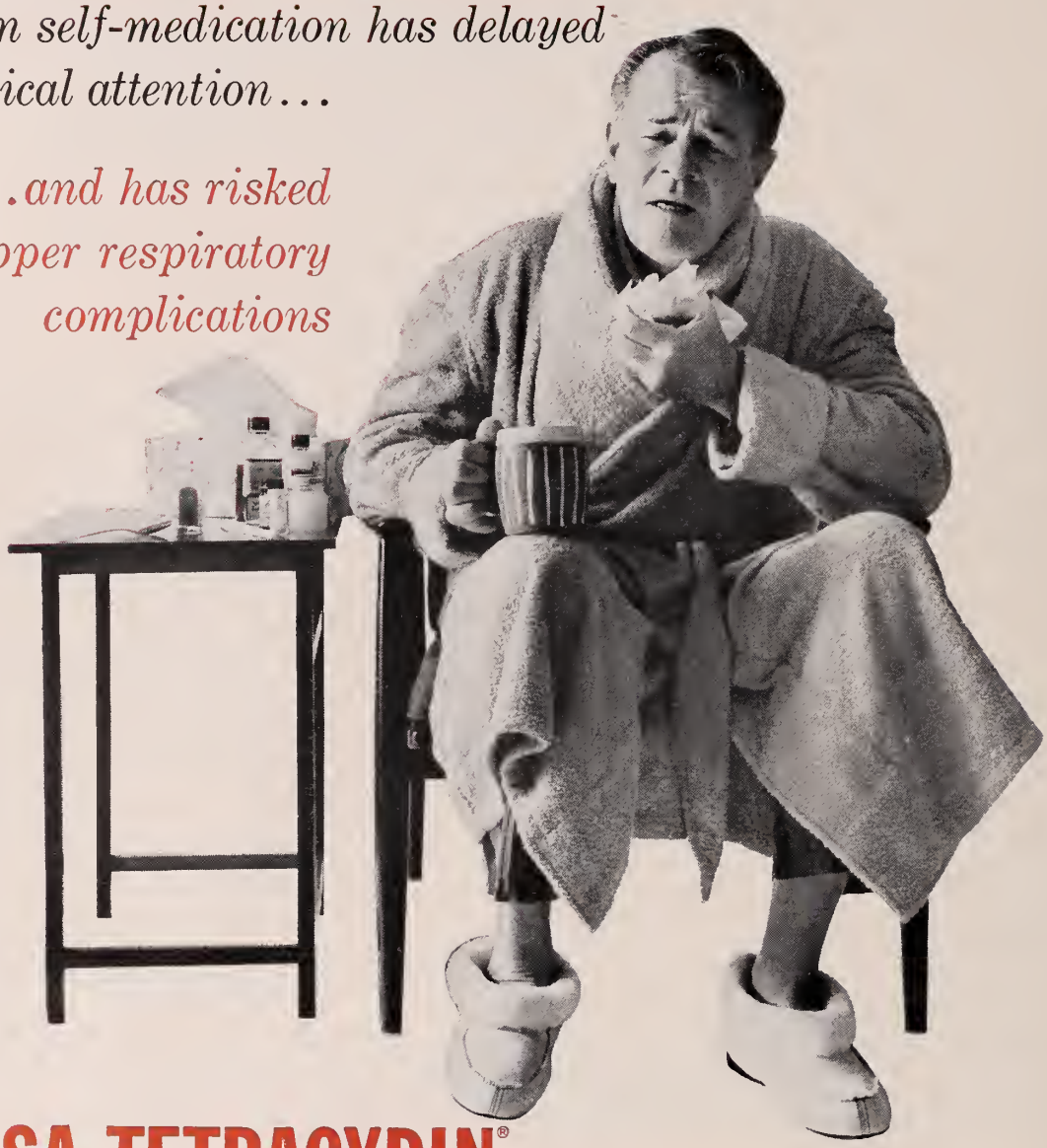
Miller, R. F.: Clin. Rev. 1:10 (July) 1958

Capsules—25, 50, and 100 mg.
Parenteral Solution (as the HCl)— 25 mg. per cc.,
10 cc. vials and 2 cc. Steraject® Cartridges;
50 mg. per cc., 2 cc. ampules.

Pfizer Laboratories
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, New York
Pfizer *Science for the world's well-being™*

in the **"COMMON COLD"**
when self-medication has delayed medical attention...

...and has risked upper respiratory complications



COSA-TETRACYDIN® **CAPSULES**

Cosa-Tetracyn® – analgesic – antihistamine compound

act quickly to

- *control secondary infection*
- *alleviate cold symptoms*

each capsule contains:

Cosa-Tetracyn	125 mg.
phenacetin	120 mg.
caffeine	30 mg.
salicylamide	150 mg.
buclizine HCl	15 mg.

average adult dose: 2 capsules q. i. d.

Pfizer *Science for the world's well-being*

PFIZER LABORATORIES, *Division Chas. Pfizer & Co., Inc., Brooklyn 6, N.Y.*

New from Lederle

a logical combination in appetite control

BAMADEX®

meprobamate with dextro-amphetamine sulfate LEDERLE

meprobamate eases
tensions of dieting

d-amphetamine
depresses appetite
and elevates mood

...without
overstimulation

...without
insomnia

...without
barbiturate hangover

Each coated tablet (pink) contains:
d-amphetamine sulfate .... 5 mg.
meprobamate ..... 400 mg.
Dosage: One tablet taken one-half to one hour before each meal.

Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

New 3¾% interest on U.S. Savings Bonds

The Treasury explains why the new ones you buy and the ones you own now are better than ever

Q: How does the new 3¾% interest rate benefit me?

A: With Series E Bonds, this rate turns $18.75 into $25.00 fourteen months faster than before. Your savings increase faster, because your Bonds mature in 7 years, 9 months.

With Series H Bonds, the 10-year maturity period stays the same but more interest is paid you each six months. With both E and H Bonds the new rate works out to 2½% for the first year and a half; then a guaranteed 4% each year to maturity.

Q: When did new rate go into effect?

A: June 1, 1959.

Q: Does the new rate change the Bonds I bought before June 1, 1959?

A: All older E and H Bonds pay more now—an extra ½% from now on, when held to maturity. The increase takes effect in the first full interest period after June 1.

Q: When my E Bonds mature, will they keep on earning interest?

A: Yes. An automatic 10-year extension privilege went into effect along with the new interest rate. This means your E Bonds will automatically keep earning interest after maturity.

Q: With the new interest rate, should I cash my old Bonds to buy new ones?

A: No. The automatic ½% increase makes it unnecessary—and in almost every case it is to your advantage to retain your present Bonds.

Q: How safe are U.S. Savings Bonds?

A: Savings Bonds are an absolutely riskless way to save. The United States Government guarantees the cash value of your Bonds will not drop, that it can only grow.

Q: What if my Bonds should be lost, stolen or destroyed?

A: If anything happens to your Bonds they are replaced—free.

YOU SAVE MORE THAN MONEY WITH

U.S. SAVINGS BONDS

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no irritating crystals[1] · uniform concentration in each drop[2]

STERILE OPHTHALMIC SOLUTION

NEO-HYDELTRASOL®

PREDNISOLONE 21-PHOSPHATE-NEOMYCIN SULFATE

2,000 TIMES MORE SOLUBLE THAN PREDNISOLONE OR HYDROCORTISONE

"The solution of prednisolone has the advantage over the suspension in that no crystalline residue is left in the patient's cul-de-sac or in his lashes . . . . The other advantage is that the patient does not have to shake the drops and is therefore sure of receiving a consistent dosage in each drop."[2]

1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

supplied: 0.5% Sterile Ophthalmic Solution NEO-HYDELTRASOL (with neomycin sulfate) and 0.5% Sterile Ophthalmic Solution HYDELTRASOL®. In 5 cc. and 2.5 cc. dropper vials. Also available as 0.25% Ophthalmic Ointment NEO-HYDELTRASOL (with neomycin sulfate) and 0.25% Ophthalmic Ointment HYDELTRASOL. In 3.5 Gm. tubes.

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MSD MERCK SHARP & DOHME Division of Merck & Co., Inc., Philadelphia 1, Pa.



get them out of bed quickly...safely

with tri-sulfanyl

sulfonamide therapy at its best

rapid, maximum recovery assured... because of rapid, prolonged high blood and tissue levels of triple sulfa mixtures.

worry-free therapy... safer, because of high urine solubility that makes risk of crystalluria virtually negligible. As specific as antibiotics in many infections, but avoids certain of their complications. Danger of moniliasis, gastric upsets, bacterial resistance, sensitivity, blood dyscrasia, etc. reduced to a minimum.

the candy-like flavor of Tri-Sulfanyl Syrup appeals to infants, children, women, all patients.

economical... costs far less than broad spectrum antibiotics . . . more effective than single sulfas.

Each 5 cc. of Tri-Sulfanyl syrup (approx. one teaspoonful) or each tablet contains 7½ grains of sulfa compound:

Sulfadiazine	0.162 Gm.
Sulfamerazine	0.162 Gm.
Sulfathiazole	0.162 Gm.
Sodium Citrate*	0.375 Gm.

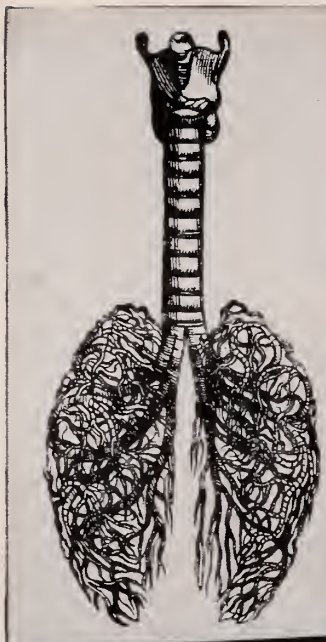
*not contained in Tri-Sulfanyl Tablets.



Tri-Sulfanyl Syrup: 4 oz., 16 oz., and gallon
Tri-Sulfanyl Tablets: 100 and 500

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Guest Editorial....

State-Wide Milk Control

TWO BILLS HAVE BEEN prepared for introduction at the next General Assembly to create a state-wide milk control act. One of these, and the one which should carry the interest and support of Virginia physicians, places control under the official State health agency and the State Health Commissioner.

Virginia needs uniform, state-wide control under one department to regulate milk from the producer to the consumer. It should be under one department entirely to prevent duplication, inefficiency and waste, and to assure complete responsibility by the official health agency.

Physicians recognize that milk is a food of vast importance and of extreme value. It, however, is a food product which carries great risk from the cow through the producing dairy, processor and the distributor, to the ultimate consumer. Milk to be safe must be meticulously controlled. Physicians appreciate the fact that no food is more easily contaminated, infected or spoiled, than is milk, and in no other food product does bacteria occur and multiply more readily or more rapidly than in milk.

To physicians, to health authorities, and to the consuming public, the primary consideration in the supervision and control of milk is to provide a food source of good quality which is safe. That means milk containing the proper proportion of the various ingredients, unadulterated, and free of harmful bacteria. It means that milk control is a health function and should be completely a health responsibility.

The milk industry, properly, is concerned with the economics of more and better milk production; healthy, well-fed and protected cattle which are free of disease, and good and adequate markets. The milk industry is not and should not be concerned, except indirectly, with the prevention and eradication of human disease. That, by law, tradition, and accepted custom, is the function of medicine and health authorities, and the health authorities in Virginia who should be responsible entirely for these functions are: The State Department of Health under the direction of the State Health Commissioner, the local health directors and departments operating under authority delegated by him and conferred by the localities.

A state-wide milk control law should be adopted, but it would be most illogical, unreasonable and unworkable to place the enforcement of such a law in the hands of any one other than the official State health agency.

A committee of the health directors' division of the Virginia Public Health Association has prepared a State Milk Control Bill repealing conflicting statutes and placing the control of milk under the State Department of Health where it unquestionably belongs. The Medical Society of Virginia has passed a resolution recommending that such control be placed in the hands of the official health agency. This Bill will carry out the intent of the resolution on milk control passed by the House of Delegates of the State Medical Society. Individual physicians should support this Bill and do all that they can to bring the reasons for this to the attention of their respective legislators.

Mack I. Shanholtz, M.D.

George Frederick Handel–A Genius In Darkness

A Contribution On His Ocular Disease

(A Memorial on the Occasion of the 200th Anniversary of His Death)

G. E. ARRINGTON, Jr., M.D.
Richmond, Virginia

O loss of sight! Of thee I most complain,
O worse than beggary, old age or chains,
My very soul in real darkness dwells!
Total Eclipse! No sun, no moon!
All dark amidst the blaze of noon
O glorious light! no cheering ray
To glad my eyes with welcome day,
Total Eclipse!

(From "Samson" by G. F. Handel)

NOTICE from a London Newspaper:

> 27 January 1753: Mr. Handel has at length, unhappily, quite lost his sight. Upon his being couched some time since, he saw so well, that his friends flattered themselves his sight was restored for a continuance; but a few days have entirely put an end to their hope.[1]

This newspaper report was neither the beginning nor the end of the events pertaining to Handel's visual disturbance and its treatment but it marked with a note of sad finality the "Total Eclipse" of England's greatest musical figure since Purcell.

As a memorial to his genius and to the vast artistic and inspirational debt we owe this giant, I shall retrace the history of his ocular disease in order to re-evaluate it in modern terms. To do so adequately demands, as does any proper medical history, not only the chronological sequence of symptoms, but an understanding of the sick person, the character and caliber of his human figure and an adequate correlation of these factors with his life and times.

A review of the life of Handel could only be a labor of love for those of us with the vivid memory of his powerful and at times tenderly moving music fresh in mind; but no attempt will be made here to thoroughly trace the interesting earlier events of his life already well recorded in the biographies listed below. The emphasis here is on what is pertinent to understanding his illnesses.

Handel was born in Halle on Tuesday, February

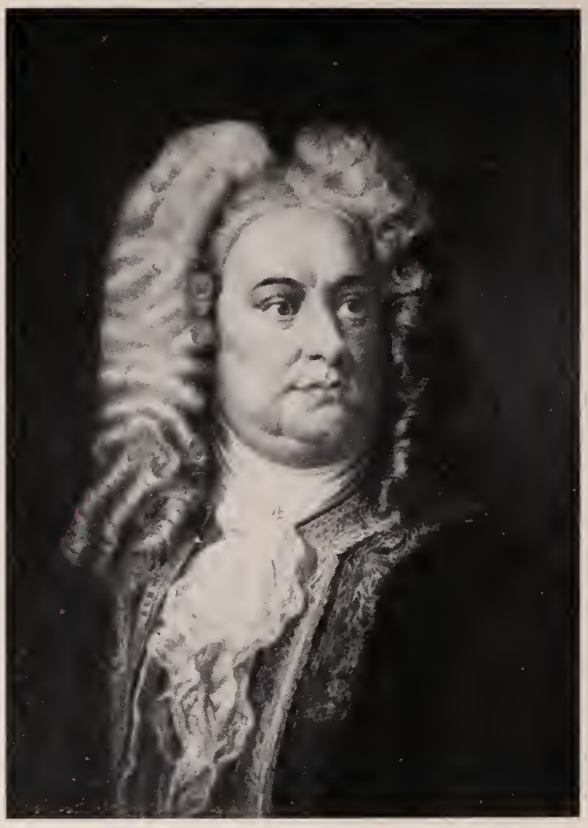


Fig. 1. George Frederick Handel. 1685-1759.

24, 1685, (just four weeks before Johann Sebastian Bach who was destined to share honors of the musical world with him although the two never met). His father Georg Händel was an eminent surgeon and physician who was 63 years of age when George Frederick was born. Handel had shown a propensity to music from his earliest years but had met with stern opposition by his father to music as a career. However, he attracted attention to his talent and

EDITOR'S NOTE: This article was written in 1959 which was the year of the 200th Anniversary.

through the intercession of the Duke Saxe-Weisenfels took up formal music instruction with Zachau, the organist of the cathedral in Halle, in 1694 at the age of nine years. He was thus grounded early in harmony and composition, producing at that early age a new church music service each week for three



Fig. 2. Death mask by Roubiliac from which he modelled Handel's tomb in Westminster Abbey.

years. Thus we gain insight into his prodigious qualities and into the innate character of his musical genius. However, unlike many child prodigies, Handel's creative flame, as we shall see, only grew in brightness throughout his life enduring to compensate somewhat for the extinguishing of worldly light in favor of a brilliant inner light.

In 1695, at the age of 11 years, he traveled to Berlin where he played at court and was offered a court appointment that was refused by his father. Returning to Halle he entered the University as a law student and was appointed organist of the cathedral at Halle.

By the age of 21 years, while living in Hamburg, he had written his *Passion According to St. John,* operas entitled *Almira* and *Nero* as well as many songs, harpsichord pieces and secular cantatas.

An Italian journey in 1707, at 22 years of age, resulted in contact with such figures as Scarlotti and Corelli and the Italian opera form which he adopted with great success. On his third visit to Rome in 1710, he was persuaded to visit England which he did in the same year. He was presented to Queen Anne for whom he composed a birthday ode in 1713. As a result he was commissioned to compose the *Te Deum* and *Jubilate* for peace celebrations at St. Paul's Cathedral, and for this service he was granted a yearly income of 200 pounds.

Handel continued in England overstaying the leave from his German Patron and thus relinquishing his responsibility as *Kapellmeister* to Elector Georg Ludwig of Hanover. As luck would have it, when Queen Anne died, that same ruler came to England as George I in 1714. The composition of the *Water Music,* first played for the monarch on a boat on the Thames following the royal barge, plus the intercession of Handel's friend, Baron Kelmansegge reinstated him in full favor which endured throughout his life.

Handel differed from Bach in his cosmopolitan scope and it has been noted that while his music was Italian in Italy and English in England, nevertheless, it was always Handel. The strength of his personality is ever present in his music while in
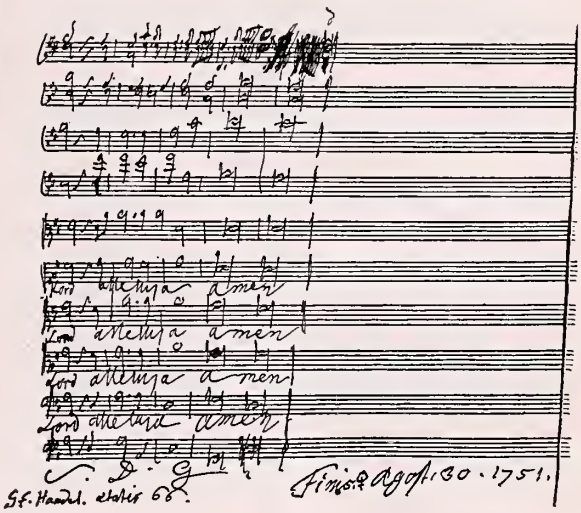


Fig. 3. Final page of the oratorio Jephtha. Handel's last work.

the music of Bach the conceptual and intellectual features transcend the personality of the composer. Handel was polyglot, speaking German, French, Italian and English. "Burney says he was impetuous, rough and peremptory in his manners and conversation but totally devoid of ill nature or malevolence. There was an original humor and pleasantry in his most lively sallies of anger and impatience, which, with his broken English were extremely

laughable." [2] The claim that his English was deficient is belied by his mastery of English accentuation and phraseology in his songs.

He was " a man of high character and intelligence" [3] and attracted to literature and art, knowing the works of Shakespeare, Ben Jonson, Milton and Dryden and counting among his friends, poets, dramatists, and scholars. His collections of fine paintings including Rembrandt's and his sojourns to art museums were particularly pleasurable to him and a particular loss after his blindness. He had friends in the financial world, and the record of his investments show care and shrewdness. He was never bankrupt though his fortune was sadly depleted by his misfortunes as an operatic impressario when the fickle London public's interest and loyalty wavered for a time. His generosity is attested to both by public record and private correspondence, a chief charity being the Foundling Hospital to which he gave a pipe organ and manuscripts of *Messiah* and personally directed performances for their benefit.[4]
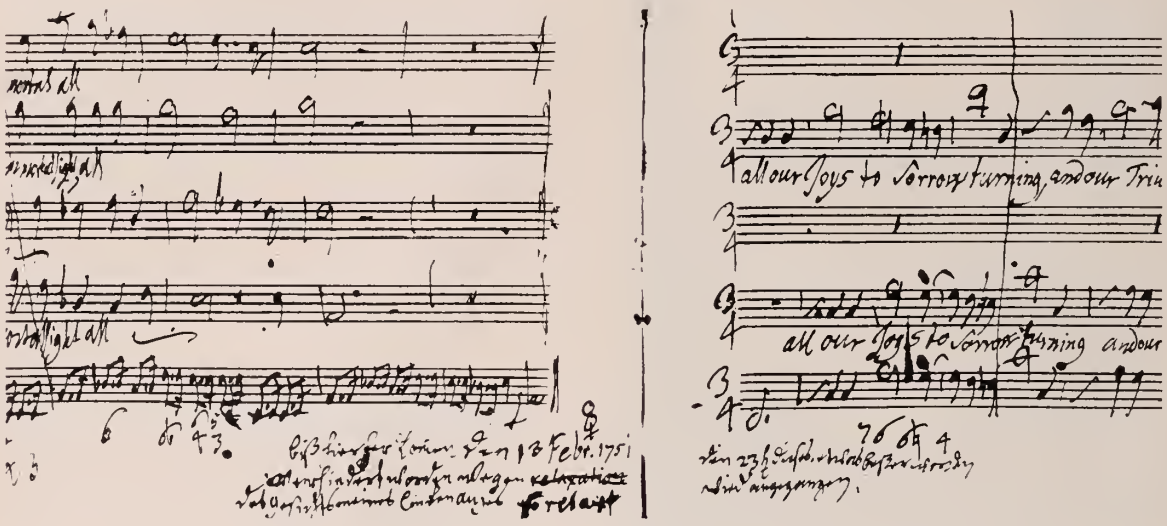


Fig. 4. Facsimile of German notes in score of Jephtha about onset of visual disturbance.
(British Museum, London)

Handel excelled for many years in the field of Italian opera but in 1733, when he was 48 years of age, this form was succeeded largely in his works by the sacred opera or oratorio. Einstein has pointed out that oratorio "had become a substitute during Lent for the opera and solo work". . . . "There can be no greater mistake than to fancy that the oratorio was nourished on ecclesiastical ground. On the contrary, it ranks with the opera as a free artistic effort, for in it for the first time a great artistic personality is speaking to his ideal public, to a nation and not a parish. . . . The performance of Handel's oratorios particularly of *Messiah* first in the British Isles and then in Germany invigorated the whole of musical public life, they enfranchised art and addressed it to the world at large, instead of to the narrow circle of connoisseurs." [5]

The fickle public of London in 1737 proved to be faithless to their previous idol and turned to Handel's musical competitors with their interest and support. Handel's position worsened rapidly until he saw the threat of bankruptcy looming before him. Despite futile attempts to recover his losses, he soon was forced to abandon his theatre and artists and to retire from his role as a musical impresario. It was in the depths of financial difficulties and personal anxiety that Handel suffered a stroke on April 13, 1737. It was reported in the London Daily Post on April 30, 1737, that he was "indisposed with rheumatism", but the same newspaper on May 14, 1737, reported that he was thought to have had a "Paralytick Disorder, he having at present no use of his Right Hand". This fact is confirmed by his biographer, Mainwaring, who stated (on pp. 121-3) that "His right arm was become useless to him, from a stroke of the palsy", and that his "senses were disordered at intervals." He further reported that Handel sought a cure at the vapor baths of Aix-la Chapelle (Sepetember 1737) and that after sitting three times as long as was the practice, a cure was effected which allowed him to play the chapel organ. He stayed on for about six weeks and on returning to London performed the sad duty of composing a Funeral Anthem for Queen Caroline, XII, who had just died. Gradually he recovered strength and experienced a new inspiration. Italian opera was a dead issue with him now and he sought and found

expression for his genius in a new field, oratorio. The great heroes of the old testament caught his imagination and he brought them into brilliant musical reincarnation. It is interesting to note that the Jewish community of London were captivated by this material and it was they who, by their interest, sustained Handel in that period of financial distress.

Of course his operas continued to be performed for many years but from his pen now flowed the gifts of such works as *Saul,* September, 1738, *Israel in Egypt,* October, 1738, *Messiah,* September, 1741, *Samson,* October, 1741, *Joseph and His Brothers,* September, 1743, *Hercules,* August, 1744, *Belshazzar,* autumn, 1744, *Judas Maccabaeus,* August, 1746, *Joshua,* August, 1747, and a variety of many other works. He continued to conduct performances of these oratarios which became an important feature of the social life of London of the times. His popularity and success again grew as did his fortune and fame.

On December 27, of 1741, he wrote to Charles Jennings (the author of *Saul* and compiler of *Messiah*) regarding the first performance of *Messiah* in Dublin, Ireland:

". . . the instruments they are really excellent, Mr. Duborough being at the head of them, and the Musick sounds delightfully in this charming room, which puts me in such Spirits (and my Health being so good) that I exert myself on my Organ with more than usual success." [6]

Handel was again in good spirits and good health and there is implied a keen awareness of the height of his vigor, energy and artistic productivity at that time which was four years after the first stroke that occurred in 1737 following his terrible financial reverses. No exact medical description of this illness is available, but an analysis of the music before and after his attack cannot fail to leave one impressed. It must be left to musicologists to analyze the matter more fully; however the shift in scope, majesty and depth of musical impact following the stroke is inescapable. The selections chosen for this study were intentionally limited to instrumental passages to prevent any emotional effects of lyrics and vocal i.e., especially verbal interpretation. I have listed these selections chronologically at the end of this paper.

Handel's introduction into London Society had been through John Jacob Heidegger, assistant manager of the opera at Haymarket Theatre. As early as 1711 he had introduced Handel to Mary Granville (later—Mrs. Delany) whose letters are a source book of anecdotes and data regarding Handel whom she highly esteemed for her whole life. She wrote the following to Mrs. Dewes on February 11, 1743-4:

"I was yesterday to hear *Semele;* it is a delightful piece of music. Mrs. Donnellan desires her particular compliments to all *but* to my brother; she bids me say 'she loses half her pleasure in Handel's music by *his not being here* to talk over the particular passages'. . . I believe I wrote my brother word that Mr. Handel and the Prince [of Wales] had quarrelled, which I am sorry for Handel says the *Prince* is quite out of *his* good graces!" [7]

We see a man of wit with a sense of self respect and personal dignity. Handel apparently had continued in a fairly good state of health until he suffered "some return of his paralytic disorder" in 1743, (Mainwaring p.134) thus presenting evidence of a possible second minor stroke. Despite this, he wrote the *Dettingen Te Deum* between July and August of the same year.

Two years later we find a quite different picture of the man (now 60 years of age) in a letter by the Reverend William Harris to his sister-in-law on August 29, 1745.

"I met Handel a few days since in the street, and stopped and put him in mind who I was, upon which I am sure it would have diverted you to see his antic motions. . . He talked much of his precarious state of health, yet he looks well enough."

By October the condition had worsened as revealed in this passage from a letter of the Earl of Shaftesbury to his cousin, James Harris, on October 24, 1745.

"Poor Handel looks something better. I hope he will entirely recover in due time, though he has been a good deal disordered in his head." [8]

The nature of this illness is unknown other than what is recorded here. But the reference to being "disordered in the head" implies a central nervous system involvement and the later events of August, 1752, lead one to suspect an encephalopathy or minor stroke. No further trace of the illness occurs and in February, 1750, the Earl of Shaftesbury again writes to his cousin James Harris:

"I have seen Handel several times since I came hither, and think I never saw him so cool and well." [9]

Exactly one year later Handel was hard at work on an oratorio entitled "Jephtha". During the writing of this fateful passage and "By a dramatic coincidence, Handel's blindness interrupted him during the writing of the chorus, 'How dark, Oh Lord, are

Thy decrees . . . all our joys to sorrow turning . . . as the night succeeds the day' " [10] a personal note is to be found in the original score of "Jephtha" written in German and translated thus:

"got as far as this [in the work] on Wednesday 13th February, 1751, unable to go on owing to weakening of the sight of my left eye. . ." [11]

This sudden return to his mother tongue after so many years of constant use of English for speech, writing and librettos for his composition cannot pass unnoticed. He was in some serious distress.

He suffered the painless sudden onset of visual disturbance of sufficient severity to interrupt his composition. With our understanding of his intensity of feeling for his work it is inconceivable that this note refers to any incipient cataract which was diagnosed the same year. There can be no question but that some other additional grossly interfering situation developed suddenly such as partial visual field defect or some other visual disturbance. Furthermore a slowly progressive process such as cataract cannot explain the following translated second note in same score just 10 days later on 23 February 1751:

"Saturday the 23rd of this month [February, 1751] a little better, started work again." [12]

The condition improved or he adjusted sufficiently to allow for continuing the work. But one month later the man was still sick with some much more general disorder than cataract as is vividly expressed in this letter of the Countess of Shaftesbury to James Harris on 13 March, 1751:

"My constancy to poor Handel got the better of . . . my indolence and I went last Friday [the 8th] to Alexander's Feast; but it was such a melancholy pleasure, as drew tears of sorrow to see the great though unhappy Handel, dejected, wan, and dark, sitting by, not playing on the harpsichord, and to think how his light had been spent by *being over-plied in music's cause.* I was sorry to find the audience so insipid and tasteless (I may add unkind) not to give the poor man the comfort of applause; but affection and conceit cannot concern or attend to merit." [13]

In the light of preceding events this description seems most appropriate. It is interesting to read this contradictory and somewhat over simplified statement of Sir Edward Turner to Sanderson Miller listed on 14 March 1751:

"Nobel Handel hath lost an eye, but I have the Rapture to say that St. Cecilia makes no complaints of any Defect in his fingers." [14] It is noted that this letter is actually dated 1750 and therein may lie the discrepancy of description.

His indomitable spirit prevailed and we read in the "London Daily Advertiser" on 1 March, 1751, that at the Oratorio of the *Messiah* performed at the Foundling Hospital, he played a "Voluntary on the Organ" . . . which met with the greatest applause. It is interesting to note that he chose a voluntary which relieved him of the necessity for reading music notes.

Two months later Handel sought a cure. He wisely turned first to conservative general medical treatment as noted in the "General Adviser" on 15th June 1751.

"On Thursday last [the 13th] Mr. Handel arrived in town from Cheltenham, Wales where he had been [for about a month] to make use of the waters." [15]

It was to little or no avail, however, and he immediately demonstrated his desire to obtain the best professional medical care at Guy's Hospital. The ocular surgeon of considerable recognition there since 1733 was Samuel Sharp (1700-1778) who figures in the history of ophthalmology as the developer of a new cataract knife and who wrote *Critical Enquiry Into the Present State of Surgery.*

It must be remembered in regard to surgical ophthalmic practice of that era, that while cataract had been correctly defined by Heister, Méry and Rolfink at the middle of the 17th Century (1656), it was not until the year 1747 when Daviel first extracted the cataractous lens intact. St. Yves had removed a cataract in fragments in 1722. Thus the extraction operation, with the improvements of Sharp's knife and Woolhouse's preliminary iridotomy in 1711, was in a state of early development when Handel's vision was afflicted, and it was also in that period that the great ophthalmic "Traites" of Maitre Jean, Brisseau and St. Yves of the Franch School of ophthalmic surgery were written. However the continued use of couching (i.e., reclination of the lens using a needle) being still at that time the operation of choice is apparent in the Medical Dictionary by G. Motherby dated 1795. (A copy of this precious source material is available in the library of the Medical College of Virginia.) The picture of ocular surgery of the 18th Century is colored by the presence of itinerant eye surgeons who manifested much skill along with much humbug. "Chevalier" John Taylor was one of these and a study of his life is an excursion into amazement and amusement for our modern scientific minds not to be

missed by literate physicians. Quackery, of course, was not limited to ophthalmic practice.

Williams writes, "He now placed himself in the hands of Samuel Sharp, the surgeon at Guy's Hospital who found that he was suffering from incipient cataracts." [16] However, although his sight rapidly was failing, humor did not forsake him. "After he had lost his sight, his surgeon Mr. Sharp recommended Stanley, the blind organist, as a person who, from his wonderful powers of memory, would be able to take his place at the organ in oratorios. Handel burst into a loud laugh and said, "Mr. Sharp, have you never read the scriptures? Do you not remember that if the blind lead the blind they will both fall into the ditch?" [17]

Despite his remark, John Stanley, blind from his second year, did indeed conduct the Handel oratorio, "Alexanders Feast" at Kings Theatre in the Haymarket on 2 March 1753.

Hawkins says that his spirits forsook him, and fortitude which had supported him under afflictions of another kind deserted him in this, scarce leaving him patience to wait for that crisis in his disorder in which he might hope for relief.[18]

Sharp examined Handel's eyes and apparently felt that either his cataracts had not reached sufficient maturity to warrant immediate surgical intervention or else some other condition rendered surgery unwise at that time. He spoke of *qutta serena* or loss of sight from some non-apparent cause as opposed to *qutta obscura* due to obvious clouding of the media as in cataracts, thus supporting my suspicion of neurogenic visual disturbance.

We read in Mrs. Delany's letter of 16 November, 1751 to Mrs. Dewes:

"I have got *Theodora* and have great pleasure in thrumming over the sweet songs with Don [Mrs. Donelien] who sings every evening. . .

"Did you hear that poor Handel has lost the sight of one of his eyes? I am sure you (who so truly taste his merit) will lament it; so much for England!" [19]

Whether this was the result of his cataract or the result of a surgical failure is not clear but he probably was not operated till the following year.

"*The Theatrical Register* informs us that on 3rd March, 1752, he was couched by William Bramfield (1712-92), surgeon to the Lock Hospital and St. George Hospital as well as to the Princess of Wales. This was the last operation and for a few days his sight was restored but it again left him and never returned. He was first quite overwhelmed by his misfortune but gathering courage he sent for his pupil the younger Smith from France. . . ." [20] James says, "he became practically blind within nine months, possibly from glaucoma set up by the operation." [21] However, Williams states "he was given to expect that a freedom from pain in the visual organs was all that he had to hope for the remainder of his days." [22] Hardly likely that he had glaucoma!

By August of 1752 his misfortune had reached public notice for we read in the "General Advertiser" on 17 August 1752:

"We hear that George Frederick Handel, Esqu. The celebrated composer of Musick was seized a few days ago with a paralytick disorder in his head, which deprived him of sight." [23] Whether this refers to the attack in February 1751 or to a new attack is not clear.

Again the fateful references to an association of central nervous system symptoms with a visual disturbance. Nothing specific is said of any paralysis or aphasia, and the fact that writing was discontinued except for a signature on his will was considered to be due only to his blindness.

At first it was thought the operation had helped his vision—Mrs. Delany writing to Mrs. Dewes on 25 November 1752 says:

"Poor Handel! how feeling must he recollect the 'total eclipse'. I hear he has now been couched, and found some benefit from it." [24]

A month later she writes again to Mrs. Dewes with great concern for his mind;

"Yesterday morning we went to the rehearsal of the 'Messiah', it was very tolerably performed. I was a little afraid of it, as I think the music *very affecting,* and I found comfort from it. . . I could not help thinking with great concern of poor Handel and lamenting his dark and melancholy circumstances; but his mind I hope will still be enlightened for the benefit of all true lovers of harmony." [25]

It is at this point that the public notice of Handel's blindness with which I began this paper appeared.

Meanwhile Handel tried to carry on with the help as mentioned of John Christopher Smith in the preparations of an English version of the Italian oratorio, *Il Trionfo del Tempo e della Verita,* written by Handel in about 1708. The new form of the work was called "The Triumph of Time and Truth" and was first performed at the Theatre Royal in Covent Garden on 11 March, 1757, shortly after its completion. The translation was by Thomas Morell, not Handel, though he had been proficient as noted above in both Italian and English and had written

poetry in German in his youth. Regarding this work we read in the "Hallische Zeitung", of Handel's home town of Halle, in April 1753:

"Not withstanding the fact that the noted Handel, this Lully of Great Britain, has had the misfortune to lose his sight, yet he like Homer and Milton, does not allow his muse to remain idle. Perhaps the work which he now shapes will be, however, his last opus. It is to become his echo, and after his death is to be sung in the Foundling Hospital, and the profits which are earned by it he has made over to this house." [26]

The work proved to be, as the frontispiece indicates, "The Apotheosis of Handel" since it is an anthology of music from all periods of his life. The older pieces were improved and reworked into the whole but no original composition occurs. As Young says ". . . it lacks the unity of conception which stamps his finest works." [27]

In May, 1753, Handel again performed a voluntary on the organ at a performance in the Chapel of the Foundling Hospital. These infrequent and limited performances continued as he grew more and more infirm. Burney points out the picture: "To see him . . . led to the organ . . . at upwards of seventy years of age, and then conducted towards the audience to make his accustomed obeisance, was a sight so truly afflicting and deplorable to persons of sensibility, as greatly diminished their pleasure in hearing him perform." [28]

In 1756 at age 71 years Handel suffered "from a great depression" [29] but the 7th of May 1757, he was again able to conduct the *Messiah* at the Foundling Hospital, and in March 1758 he held a rehearsal for a revival of *Judas Maccabaeus* in his home.[30] The revival was a great success, but his depression increased and his state of health continued to decline. He was now 73 years of age.

It is at this time that Handel may have sought further treatment for his blindness by John "Chevalier" Taylor (1703-1772) an itinerant occulist. We know from Baker's Diary on 26, August, 1758 that Handel went to Tunbridge Wells and from Doctor William King's writings we learn that he met Taylor there at that same time.

On 26, August 1758 Baker's *Diary* has this entry:

"Left horse and took post chaise . . . to River head 12 miles—Thence fresh chaise 14 Tunbridge Wells. . . At Wells then and after Handel and his Doctor Murrell [apparently the Rev. Doctor Thomas Morell, Handel's librettist] Taylor the occulist. . ." [31]

Whether Taylor actually operated on Handel's eyes is a moot question since no definitive evidence exists. Certainly the extravagant claims of Taylor's own writings must be carefully evaluated; however certain references are interesting as found in Taylor's "History and the Travels and Adventures of the Chevalier John Taylor, Ophthalmiator Pontifical, etc." 1761:

"I have seen a vast variety of singular animals . . . and particularly at Leipsick, where a celebrated master of music, who had already arrived to his 88th year received his sight by my hands; it is with this very man that the famous *Handel* was first educated and with whom I once thought to have had the same success, having all circumstances in his favour, motions of the pupil, light, etc. but upon drawing the curtain, we found the bottom defective *from a paralytic disorder.*" [32]

Like all of the Chevalier's flamboyant claims and name dropping for commercial reasons, these too must be considered with skepticism, but for our hypothesis of some form of neurogenic visual defect, Taylor's reference is indeed provocative.

If Handel were examined by Taylor and *if* the pupillary reactions were found to be present, and *if* he had a "paralytic disorder" which prevented success despite satisfactory surgery, then one would suspect strongly that Handel's visual impairment was largely produced by the repeated insults to his central nervous system including finally the visual pathways.

Just how Taylor diagnosed the bottom (not likely to be the fundus or optic nerve) as "defective from a paralytic disorder" is a mystery unless he simply meant non-seeing or some extraocular muscular defect. Could Taylor somehow have diagnosed central nervous system blindness? The newspaper account of 17 August, 1752 would then fit as either blindness due to unsuccessful surgery of more likely a third (?) stroke further affecting the remaining vision. There seems to be no question in the reporter's mind that the blindness was due to Handel's being seized "with a paralytick disorder in his head. . ."

On 6 April, 1759, at age 74, "Handel was seized with faintness following conducting *Messiah* at Covent Garden".[33] His engagement to conduct the same work on 3 May 1759 was filled by John Christopher Smith. A trip to Bath "for the benefit of the waters" could not be made due to his illness.

On 11 April 1759, Handel executed the fourth and last codicil to his will in which he hoped "to have permission of the Dean and Chapter of Westminster

to be buried in Westminster Abbey in a private manner. He also left 600 pounds for a monument of himself to be erected there. This was quite unusual but was accepted gracefully." [34]

Handel was now bedridden and under the care of Doctor Warren when he died at 8:00 P. M., on Monday 14th April 1759 at 74 years of age.

True to his desire, he was buried at the Foot of Duke of Argyle's monument in Westminster Abbey; the Bishop, Prebendaries, and the whole choir attended, to pay the last honors due to his memory, and it is computed there were not fewer than 3,000 persons present on this occasion.

Thus began his immortality.

COMMENTARY

We have no professional medical observations on which to base conclusions. However the evidence is strong that the character of Handel's visual disturbances cannot be explained on the basis of senile cataracts alone. It is likely that this condition existed, but some other hypothesis such as the effects of multiple strokes seems an explanation worthy of consideration.

The following dates are significant:

1737 (September) Stroke with paralysis of right arm and rapid recovery.
1743 Recurrence of paralysis.
1745 (August-October) "Precarious state of health", ". . . disorder in the head".
1751 (February 13th) "weakening of sight of my left eye."
1752 (May) Couched by Bramfield.
1752 (August) ". . . a Paralytic disorder in his head which deprived him of sight."
1756 "depression" (mental).
1758 "The bottom [of the eye] defective from a paralytick disorder." (Taylor)
1759 "Faintness" and death.

Of significance also is the fact that, more than commercial expediency, what seems to this listener to be a change in Handel's style of composition and indeed an enlarging of the character of the music itself as well as the solemnity of the religious subject matter of the oratorios may relate to a change in the composer himself due to his first stroke in 1737. Certainly, no one undergoes such an experience lightly. A man such as this, so intellectually equipped to consider the threat to his life and so able to revalue the purposes and goals both in the broader philosophical as well as the immediate economic spheres, would be expected to formulate fresh and new statements of these aims. For Handel this restatement came in the form of the sacred oratorios, the most familiar to us being the *Messiah* which we hear traditionally at the Christmas season. In the oratorio his greatness flowered. There was the mastery of solo, vocal and choral music, the new depth and breadth of emotional and philosophical expression in the harmonization and instrumentation. The dramatic exposition of the exploits of great religious heroes, the contrasts of tonality and mass musical effects to depict deep religious meaning and conflicts of good and evil. In short, his music became the expression of man's greatest inner experiences and for this he won his immortality and his place in the hearts of all who feel kinship with his faith and hope in the dignity and stature of mankind.

APPENDIX

List of Music before and after strokes:

1714—Water Music
1720—Harpsichord Music Suite #2 F major
1735—Alcina Overture
1735-36—Organ Concertos No. #1-6
1737—Bernice Overture
1739—Ode for St. Cecilias Day
1739-40—Organ Concerto D major
1741—Messiah (Instrumental portions)
1746—Judas Maccabaeus Overture
1752—Jephtha

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Enlarged Arteries in Heavy Smokers

Significant variations in the diameter of arteries of the lungs of heavy smokers as compared with those of nonsmokers have been found in a study of chest x-rays. Dr. Josue Pagan-Carlo, department of radiology, Touro Infirmary, New Orleans, reported the findings in the December 19 issue of the Journal of the American Medical Association.

The arterial shadows on routine chest x-rays of 694 smokers and nonsmokers were measured by calipers in the study.

In the area of the right descending pulmonary artery, the study revealed that average measurements of the arteries of heavy smokers were significantly higher than for nonsmokers. A heavy smoker was defined as one who smokes more than 30 cigarettes a day.

The expansion of the pulmonary artery in heavy smokers may result from constriction of the smaller branches of the artery brought on by the chronic effect of nicotine. "No one knows all the possible reflexes initiated in the lungs as a result of . . . the effects of the irritating inhalants in the tobacco smoke."

Dr. Pagan-Carlo pointed out that "no significant difference was demonstrable in the vascular markings of light and moderate smokers, as compared to nonsmokers."

Medical Management of Bleeding Peptic Ulceration

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Severe gastrointestinal hemorrhage with medical-surgical appraisal is discussed. A series of cases is presented and the indications for surgery reversed.

THERE ARE FEW ILLNESSES more frightening to an individual than severe or moderate gastrointestinal hemorrhage. The existing or impending emergency and the patient's anxiety demand an orderly and systematic approach and an understanding of the place for conservative and surgical therapy. During the past ten years there has been more emphasis on the individual patient evaluation with a decrease in the number of emergency operations.[1,2] The main problem is the determination, if possible, of whether the hemorrhage is due to severe capillary diapedesis,[3] in which cases conservative management is usually effective, or to an eroded vessel in the base of the ulcer where conservative therapy has no place and emergency operation is mandatory.

From May 1953 to May 1959, 74 episodes of hemorrhage due to gastroduodenal ulceration have been treated by the identical medical-surgical management and modified Meulengracht regime as described by Bowers and Rossett,[4] Rossett and Stephenson,[5] and Rossett,[6] who reported a series of 360 cases with a mortality of less than 2 per cent and an operability rate of 1.3 per cent. The bleeding was considered severe if the patient was admitted in shock or showed clinical evidence of hypovolemia, hemoglobin below 8.0 gm. per 100 ml., or hematocrit less than 24 per cent, or if bleeding was persistent or recurrent and there was need for large amounts of blood. (Table 1) Since blood was not pushed to the maximum hydrated level, the amount required was less than in other series.[10] This definition of severe hemorrhage is similar to that recorded in the recent literature.[1,2,7,8,9]

Table 1

Data of Massive Bleeding Group

Age	23-74	Avg. 49
Sex	35 male	0 female
Race	27 white	8 Negro
Ht.	16-28	Avg. 22
RBC	1.9-3.7 Million	Avg. —
Hb.	4.1-10.9 gm.%	Avg. 7.5
Blood	1000-5000 c.c./24-48H	Avg. 2100 c.c.

There were 35 episodes of severe hemorrhage of which 28 instances were due to duodenal ulcer, four to gastric ulcer, one each to jejunal and marginal ulcers, and one from site undetermined and included because duodenal ulcer was not excluded and death occurred. (Table 2) Emergency surgery was not required. Elective subtotal gastric resection was performed twice for gastric ulcer and four times for duodenal ulcer. An elective gastroenterostomy with vagotomy was performed on a 74-year-old white male with obstruction seven weeks after bleeding had ceased. The one death in this group of 35 cases gave a mortality of 2.9 per cent. It occurred in a 48-year-old Negro male who had been drinking heavily for five days prior to admission and site of bleeding was not determined. He was admitted with hematemesis and melena, pulse 140/min. and blood pressure 140/100, hemoglobin was 9.0 gm. per 100 ml., hematocrit 30 per cent. Twice after admission he vomited with the blood pressure falling to 108/80. He received 1500 c.c. whole blood and was treated with the Sengstaken-

Table 2

Type	Severe	Moderate	Mild	Total
Duodenal	29*	29	8	64
Gastric	4	0	2	6
Marginal	1	1	1	3
Jejunal	1	0	0	1
Totals	35	30	11	74

*This includes one case of hemorrhage from site undetermined.

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Blakemore tube with the blood pressure stabilizing at 130/100 and pulse 94. Just prior to death the hemoglobin was 8.0 gm. per 100 ml., hematocrit 27 per cent. The patient was seen by the nurse 20 minutes prior to death at which time the blood pressure and pulse were unchanged. Permission for necropsy was not obtained.

Although the series is small, the low mortality is significant when it is realized that all were severe cases of hemorrhage and the regime used was identical to that reported by Rossett,[6] with whom I was associated during a portion of the period when he was collecting his 360 cases. Because of the low mortality rate and the lack of need for emergency surgery, the bleeding in this series is thought to be due to capillary diapedesis.

The complete management of severe hemorrhage is divided into four stages: (1) Initial emergency, (2) Diagnostic procedures, (3) Intensive therapeutic, and (4) Long range therapeutic program to prevent recurrence.

When admitted in a state of shock the usual procedures necessary to combat this condition must be started immediately. The cause or site of hemorrhage is less important at this point than the replacement of whole blood. The blood is drawn for the typing and the determination of hemoglobin, hematocrit, prothrombin time, Lee-White coagulation time and NPN using a #15 and #18 gauge needle so that plasma expander and whole blood can be attached when available. Whole blood is forced at the rate of 125-250 c.c. per hour which permits approximately 6000 c.c. in 24 hours, if required.

In addition to the determination of the absence of coagulation defects, close attention is paid to the history and physical examination. In those cases where there is no clear-cut evidence of hematemesis, a Levin tube can be passed to learn the presence and character of blood in the stomach. If liver disease is suspected or known to be present, and there is the possibility of several sites of hemorrhage, a Sengstaken-Blakemore tube is passed. With inflation of the gastric balloon alone or with esophageal balloon pressure the effect on the bleeding can be determined. Frequently, varices and ulcer are both present with hemorrhage due to the peptic ulceration in approximately 13.2 per cent.[10]. I have had no experience with endoscopic examination during the active bleeding stage, but Palmer[11] emphasizes the need for a vigorous diagnostic approach and cites a 22 per cent incidence of acute gastritis. In this condition the gastroscopic picture would be normal within forty-eight hours. In the series reported, gastroscopic examination was performed after the initial gastrointestinal x-ray series. Emergency x-ray studies were not requested and not indicated.[12] The upper GI series should be done 24 hours after bleeding is controlled and may be indicated in some cases as soon as shock is controlled. It is made with the patient in the recumbent position, using the left lateral decubitus technique of Hampton, and avoiding all manual pressure. Ulcer niches filled with blood and early ulceration with no scarring will usually not be demonstrated, but since the treatment will continue as if the active ulcer is present, it is unwise to use any pressure that may cause bleeding to recur. In the present series there was one case of recurrent bleeding that was associated with unrequested use of pressure during the fluoroscopic examination on the second day following hemorrhage.

Intensive therapy is an integral part of the emergency treatment. As the blood is replaced and the ulcer treatment is in progress, frequent observations by all persons giving treatment are required in order to determine the effectiveness of therapy and the need for surgical intervention. To assist in this determination it is well to remember those factors influencing a high mortality—age greater than 50, BUN over 100, continuation of pain with bleeding, initial hemorrhage, onset of hemorrhage after hospitalization, presence of multiple diseases such as cirrhosis of the liver, hypertension, heart diseases, and the high mortality of hemorrhage in gastric ulcer.[5,8,10,13]

Treatment consisted of a modification of the Meulengracht[14] regime as follows:

(1) Complete bed rest without visitors or tobacco.

(2) Prompt and adequate sedation obtained by oral or parenteral sodium amobarbital. Morphine is contraindicated due to its central parasympathetic stimulation causing hypermotility and hypersecretion and occasional nausea and vomiting.

(3) Pureed feedings every two hours during the day and 100 c.c. of milk with 0.9 gm. calcium carbonate and 0.1 gm. magnesium oxide every two hours 10 P.M. through 6 A.M. If vomiting was present on admission, food was withheld for 2-3 hours and then 60-100 c.c. of milk with the same powder mixture. If this was tolerated, feedings were then started. In some cases the milk and powders were needed every hour at night to provide adequate neutralization and control bleeding. Wirts[15] has

clearly shown the importance of buffering to allow the clotting of blood in the gastrointestinal tract. Suction is not used because of the stimulation of peristalsis reactivating bleeding.

(4) Anti-cholinergic drugs such as Pathilon® every 6-12 hours to those under 60 years of age. Banthine®, Pro-banthine®, and tincture of belladonna were not used because of previous experience with toxic psychosis.

(5) Clinical evaluation of control of hemorrhage by close observation of pulse and blood pressure at frequent intervals and frequent determinations of hematocrit level. Tachycardia and drop in blood pressure in the absence of electrolyte disturbance, heart failure, and irreversible shock is as a rule a significant clinical sign of continued bleeding. However, one case in this series showed a drop of hematocrit from 41 to 20 in a period of 24 hours with no change of blood pressure or pulse. Dizziness in the sitting position was the only sign of bleeding.

(6) Adequate replacement of whole blood as determined by clinical picture, changing hematocrit, and change is frequency and amount of melena. The blood volume studies as recommended by Stewart are considered impractical in the usual practice.[15,16] In severe hemorrhage 1000 c.c. of whole blood will be required before any change is noted in the hematocrit even though active bleeding has ceased. Those over 40 years of age require a maintenance of a higher hematocrit and regardless of the physical status, the hematocrit of 37-38 should be reached to prevent a myocardial infarction.[23]

All cases of severe and moderate hemorrhage were considered individually and were seen by a surgical consultant immediately to permit the combined observation during the critical period. By adequate replacement of blood, adequate attention to complete neutralization of gastric acidity, and close observation of the clinical changes, response to therapy can be seen within the first twelve to twenty-four hours and a definite decision made before the critical forty-eight hour period has expired at which time the mortality rises from 5-33 per cent to a high of 70 per cent.[17,18] Mortality figures for early emergency surgery remain high (11 per cent,[11] 15 per cent,[13] 20.9 per cent,[20] 26.3 per cent,[22] 28 per cent,[7] 32 per cent,[2] and 28 and 7 per cent[16]). However, when the blood loss is faster than replacement, emergency surgery is required. When this occurs the bleeding is probably due to an eroded vessel and a suggestion of this severe hemorrhage can usually be noted in a two-hour period of observation. Therefore, an intensive program and evaluation is warranted to determine rapidly the type of hemorrhage (eroded vessel or capillary diapedesis). This in turn establishes more clearly the need for the continuation of non-operative management or the use of elective or emergency surgery. The mortality figures for such a continued medical-surgical management are 1.3 per cent,[15] 2.0 per cent,[4,6] 3.6 per cent,[19] 3.9 per cent,[15] and 4.5 per cent.[20] Recommended indications for surgery in outline form follows:

Indications for Emergency Surgery

(1) Massive hemorrhage in which the blood pressure and pulse cannot be stabilized after 4-5 pints of blood and bleeding continues faster than can be replaced.

(2) Massive hemorrhage that occurs after being previously controlled.

(3) Massive hemorrhage that occurs while under therapy for uncomplicated ulcer.

(4) Hemorrhage associated with perforation or severe obstruction.

Indications for Early Elective Surgery

(1) Gastric ulcer.

(2) Post-bulbar duodenal ulceration (because of high incidence of bleeding, 60 per cent, and recurrence).[24]

(3) Severe bleeding not easily controlled medically during last episode.

Indications for Interval Elective Surgery

(1) Repeated episodes of hemorrhage after three or more trials of intensive medical management.

(2) Severe bleeding in a person who will not follow the regime.

(3) Bleeding in person over 50 years of age.

Recently the value of hypothermia in the control of massive hemorrhages has been advanced by Wangensteen[25]. He maintained the temperature of an intragastric balloon at 10-14 degrees C by infusing a mixture of equal parts of ethyl alcohol and water through a closed system. The cases treated had failed to respond to other therapy. He reports 10 cases of hemorrhage from duodenal ulceration and two from gastric ulceration with cessation of bleeding in each case. This will further decrease the need for emergency surgery in the poorly prepared patient.

The recurrence rate of hemorrhage following sur-

gical and medical therapy has been high. Boles and Jordan[26] report a recurrence of hemorrhage in 38 of 141 cases treated medically during a four and one-half year period (26.9 per cent), and 19 of 125 treated surgically by subtotal resection during a four year follow-up period (15.2 per cent). Donaldson[27] had a 39 per cent recurrence in 136 cases of bleeding during a five year follow-up period. Thirty-two had subtotal resection (50 per cent recurrence), and 21 had conservative treatment (30 per cent recurrence). Because of these poor results and the occurrence of hemorrhage following any operative procedure, all ulcer patients should be treated intensively during periods of stress, such as, operations, burns, tooth extractions, illness and grief.

SUMMARY

(1) The management of severe gastrointestinal hemorrhage with individual medical-surgical appraisal has been discussed.

(2) A series of thirty-five cases of severe hemorrhage due to peptic ulceration with a mortality of 2.9 per cent has been presented. Only the results of severe hemorrhage are of statistical value.

(3) The indications for surgery have been reviewed.

(4) Early elective surgery in those cases of hemorrhage from gastric and post-bulbar duodenal ulcerations is recommended due to the frequent recurrence of hemorrhage and poor response of the latter to medical therapy.

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Hypnosis in Chronic Alcoholism

Hypnosis appears to be useful in the treatment of chronic alcoholism, an experimental study has shown. Appearing in the November 14 Journal of the American Medical Association, the preliminary report covering "a relatively small group of patients" was made by Dr. Michael M. Miller of Howard University Medical School, Washington, D.C.

Under hypnosis, an aversion to alcohol is created, so that "even a slight whiff or taste of alcoholic beverages might be sufficient to evoke a conditioned aversion reaction." Such a patient will not consume alcoholic beverages if he derives no pleasure from them and actually finds that the smell, taste, and sight of alcohol upset him physically and emotionally.

Dr. Miller has used the treatment for 24 patients, whose duration of alcoholism ranged from three to 34 years. The average number of treatments was two and the average length of time they have remained away from alcohol has been six months.

Of the total, only three have relapsed so far. Eight attend Alcoholics Anonymous meetings and 18 are continuing psychotherapy.

"No claims are being made for this treatment as a cure-all for alcoholism. It represents only a procedure for attempting to control drinking so that constructive psychotherapeutic, social and economic rehabilitative steps can be taken.

"Alcoholism is symptomatic of deeper underlying disturbances of the personality, and there are probably as many diverse causes for alcoholism as exist for human unhappiness."

He noted that after the initial treatment about half of the patients tested themselves with alcoholic beverages and all developed prompt aversion reactions (nausea and vomiting) and discontinued further attempts.

If the patient is in a poor nutritional state or in need of medical care, posthypnotic suggestion can be used to facilitate his cooperation in remedial measures.

Patients should be conditioned to avoid the use of sedative drugs and tranquilizers as a substitute for the alcohol. Alcoholics are particularly apt to develop dependency on habit-forming sedative drugs, since they are generally suffering from marked inner anxieties and guilt.

The use of hypnosis in the treatment of chronic alcoholism offers certain advantages over the use of drugs such as disulfiram (Antabuse). It can be used on an outpatient basis; it precludes the possible harmful effects of drugs; it can establish a reflex aversion much more rapidly and effectively without causing the patient as much discomfort and dread of treatment.

However, the treatment must be conducted only by a psychotherapist who is well trained in hypnosis. "Hypnotherapy is a method that requires adequate comprehension of the dynamics of the unconscious mind. Much harm can be done by its misuse, and it must be used only with specific medical indication, never indiscriminately."

The Corticosteroids in Obstetrics and Gynecology

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Corticosteroid therapy has been found to be of value in several obstetric and gynecologic conditions. Although low doses of corticosteroids are recommended, they are potentially dangerous. Despite the hazards, the results are often worth the risks.

CORTICOSTEROIDS now occupy a definite place in the pharmacologic armamentarium of the physician practicing obstetrics and gynecology. The advent of more potent steroids with fewer side reactions has been coincident with a progressive extension of indications for their use. Used knowingly and carefully, these compounds may be employed with relative safety and will often be strikingly beneficial in a variety of obstetric and gynecologic abnormalities.

Reports of an increased incidence of certain congenital anomalies in the offspring of animals treated with high doses of cortisone during gestation have appeared.[1,2,3,4] Definite evidence of a similar effect in the human being, however, is lacking. At this time, it would seem that there is no valid reason for avoiding the use of these drugs when they are indicated during pregnancy.

HYPEREMESIS GRAVIDARUM

One of the most dramatic effects of corticoids may be seen in severe hyperemesis gravidarum. Used properly, these drugs may prevent a prolonged, uncomfortable hospitalization and simplify what may otherwise be a very difficult problem. The lethargy, weakness, dehydration, hypotension and deranged electrolytes in severe hyperemesis are not unlike the clinical picture of adrenal insufficiency. Noting this, investigators have empirically employed aqueous adrenal extract and more recently ACTH and cortisone in this obstetric complication.[5,6,7] It is recommended that an infusion of normal saline containing 100 mgm. of intravenous hydrocortisone be given to these patients. Additional fluids may be required, but the drug should be administered only once daily. Often this regimen will produce dramatic results and completely alleviate symptoms within 48 to 72 hours. The mechanism of action is not understood, but the beneficial effect may well rest in the rapid restoration of electrolyte balance and the sense of well-being brought about by the corticoids.

Rh IMMUNIZATION

Reports of the successful use of corticosteroids in patients with Rh immunization have appeared. Some glowingly successful and others much less enthusiastic, these studies are contradictory and seem to indicate a need for more observations. Hunter has reported a very high fetal salvage in women who had previously had stillborn erythroblastotic infants and who were treated with cortisone during subsequent pregnancies.[8] It was observed that although these infants had a positive Coomb's test and often needed exchange transfusions, they did not die in utero. Other investigators have given corticoids to Rh-immunized mothers who show a rising antibody titer and claim increased fetal salvage.[9] Since no well controlled study has been done, it would appear that the usefulness of adrenal steroids in Rh-immunized women has not been definitely established and the place of this therapy awaits further investigation.

TOXEMIA OF PREGNANCY

Corticosteroids have been used in the treatment of preeclampsia without benefit. It appears that these compounds have no place in the specific therapy of late toxemias of pregnancy.

In gynecology, corticosteroids have proved to be of value in three areas; namely, in pelvic inflammatory disease, as pre-operative preparation for fistula repairs, and in certain types of menstrual dysfunction. The use of these drugs in the local therapy

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of various lesions of the external genitalia is familiar to all and is mentioned here only for completeness.

PELVIC INFLAMMATORY DISEASE

In 1952, Collins and associates reported the use of cortisone in the treatment of ligneous cellulitis of the pelvis following irradiation and radical surgery for malignancy.[10] Using a ten-day course of therapy in conjunction with antibiotics, they found marked resolution of induration and excellent symptomatic response. The inhibition of the formation of granulation tissue and fibroplasia as well as the increased growth of tissue macrophages, brought about by cortisone, account for the beneficial effect in these patients. Since this original observation, corticoid therapy has been extended to include the treatment of resistent pelvic inflammatory disease. Weils and associates have recently reported complete symptomatic relief in 17 of 22 patients treated with descending doses of cortisone for five weeks in conjunction with tetracycline therapy.[11] In selected patients with tubal occlusion presumably due to pelvic inflammatory disease, long term, low dose corticoid and antibiotic therapy will restore tubal patency in an occasional instance. As might be expected, however, success is infrequent and the incidence of ectopic gestation may well be increased in such patients. It must be emphasized that the use of these drugs in the presence of any infectious process may lead to a spread of the infection, a hazard which can be minimized by adequate antibiotic coverage.

FISTULAS

Cortisone has proved of great value in the preoperative preparation of patients prior to recto-vaginal and vesico-vaginal fistula repair by markedly reducing the interval between diagnosis and definitive treatment. Collins and Jones report a decrease of this time element from an average of ninety-four weeks in their control series to four weeks in the cortisone-treated group.[12] As soon as a fistula is discovered, the patient is placed on broad spectrum antibiotics and 300 mgm. of cortisone per day. This is continued for ten days after which the surgery is immediately performed. With this therapy a marked change in the tissues surrounding the fistula is seen, and occasionally spontaneous closure occurs. The decrease in fibroplastic activity and increase in macrophages markedly lessen the inflammatory reaction to leave clean, healthy tissues which may be repaired promptly with good results. Shortening the period between creation and repair of a fistula and thus avoiding the long, uncomfortable, often disabling wait which has formerly been the lot of these unfortunate women will be highly gratifying both to the patient and to the physician.

MENSTRUAL DISORDERS

Probably the most widespread use of corticoids in specific gynecologic therapy is to be found in the treatment of certain menstrual disorders. The efficacy of these drugs in the correction of menstrual abnormalities arising from a variety of anovulatory conditions is well documented. A specific effect has been demonstrated in some of these conditions while the exact mode of action in others remains elusive. Whether specific or empiric, this therapy may be used in selected patients with highly gratifying results.

The close interrelationship of the pituitary-adrenal-ovarian axis was first suggested when Forsham, et al., noted the occurrence of menstruation in three amenorrheic patients following a single injection of 25 mgm. of ACTH.[13] This interaction was further demonstrated when Sohval and Soffer reported increased gonadotropin activity in patients receiving cortisone or ACTH therapy.[14] In 1951, Wilkins, et al., pointed out that cortisone alone could initiate normal menses in patients with congenital adrenal hyperplasia.[15] The observations of Jones, et al.,[16] and Greenblatt[17] that these compounds were also effective in women not manifesting this syndrome opened the door to their use in a wide variety of menstrual disorders.

CONGENITAL ADRENAL HYPERPLASIA

Primary amenorrhea is the rule in congenital adrenal hyperplasia. The mechanism of an enzymatic defect in the synthesis of hydrocortisone, leading to excessive ACTH stimulation with a consequent increase in adrenal androgens in this syndrome, is well documented. The suppression of pituitary gonadotropin secretion by the elevated androgen level probably accounts for the absence of menstrual function. On the other hand, the possibility that the increased ACTH production directly suppresses pituitary gonadotropins cannot be overlooked. In either instance, however, the administration of a corticoid serves to block ACTH production and consequently to lower adrenal androgen output. This allows the resumption of normal gonadotropin production and release with a consequent restoration of menstrual function. That corticoid therapy may initiate ovulatory menses in these individuals is well documented and seemingly confirmed by the occur-

rence of normal pregnancies and deliveries in treated patients.

It should be noted that these women usually have definite evidence of masculinization in the form of hirsutism, enlargement of the clitoris, short stature, voice change and the like. The distinguishing feature of this group is the excretion of high levels of 17-ketosteroids and large amounts of pregnanetriol. A second type of patient similar to this group has been described by Gold and Frank.[18] Of normal height, these women usually have mild to marked hirsutism usually without other signs of virilization. 17-ketosteroid excretion at the upper limits of normal and a marked evelation of the excretion level of the "pregnane complex" are the distinguishing features. Usually having no effect on existing hair growth, corticoids will often restore menstrual function, ovulation, and fertility in these otherwise amenorrheic, barren women.

POLYCYSTIC OVARY SYNDROME

In 1935 Stein and Leventhal described a group of amenorrheic, sterile women in whom menses were restored following bilateral wedge resection of the ovaries.[19] Robinson, in the same year, described a similar result in meno-metrorrhagia.[20] Much investigation into the pathologic physiology of this syndrome has been undertaken, but the true mechanism of action remains unclear. Although Stein and Leventhal are careful to exclude women with elevated urinary 17-ketosteroids, this division appears artificial, these patients probably being part of a much larger group designated Polycystic Ovary Syndrome. Obesity, menstrual disorders, varying degrees of hirsutism, normal or elevated urinary 17-ketosteroids, normal urinary pregnanetriol, and bilaterally enlarged ovaries are the main clinical characteristics of this syndrome. Histopathologically, the ovaries show a thickened capsule, hyperthecosis, thecal hyperplasia, luteinization of the stroma, and an absence of corpora lutea.

In managing patients with the polycystic ovary syndrome, one must first rule out adrenal tumors and hyperplasia, virilizing ovarian tumors, genetic hirsutism, and other causes of virilization and/or amenorrhea. After these conditions have been excluded by appropriate means, corticoid therapy may be instituted. It is said that in about one-third of patients with the polycystic ovary syndrome, ovulatory menses will be instituted by steroid therapy alone. Another one-third will respond to wedge resection alone while the remaining one-third will require both surgical and medical therapy. Probably there are some patients who will respond to either wedge resection or corticoids.[21] Since a major operative procedure may be avoided in a fair number of these patients by administering adrenal steroids, it is believed that they should be tried before resorting to wedge resection.

In treating this syndrome, the choice of steroid seems to make little difference and should be determined by the experience of the physician. The equivalent of 37.5 to 50 milligrams of cortisone is administered daily along with supplementary thyroid and potassium as well as a low fat, low carbohydrate, low salt, high protein diet. Such a regimen, if strictly followed, will reduce complications to a minimum. If ovulatory menses do not occur within six or eight months, this therapy should be abandoned and other treatment instituted. If ovulatory menses do ensue, the corticoids should be continued for twelve to fifteen months and then withdrawn to see if spontaneous ovulations will continue. It must be emphasized that the dosage outlined is sufficient and higher doses will only increase the number and severity of complications while offering no higher success rate.

More or less empiric corticoid therapy has been used in certain infertile women who manifest no endocrine abnormality other than infrequent ovulation. In some of these patients adrenal steroids have brought about more frequent ovulations with a consequent increase in chances for conception. At this time, this appears to be still in the experimental stage and is not recommended for general use since the possible severe complications preclude the use of adrenal steroids except when strict indications are present.

DANGERS

The drugs discussed here are potent and fraught with danger if unwisely used. Even with the relatively low dosage recommended, complications may occur in the form of activation of tuberculosis, masking of symptoms of any type of infection, potentiation of diabetes, and activation or creation of gastrointestinal ulcers. These should be diligently watched for and treated as soon as they arise. That adrenal steroid therapy is contraindicated in tuberculosis, diabetes, peptic ulcer, and certain other conditions must always be borne in mind. Patients receiving these drugs must be seen frequently and carefully watched for the occurrence of complications. It is wise to assume that the patient's adrenal function is always suppressed to some degree and

that appropriate prophylaxis in the form of increased corticoid administration must be instituted during periods of stress. Slow withdrawal in an orderly decreasing dosage is also recommended. Constantly keeping these dangers and contraindications in mind, one may use these drugs in selected patients with a fair degree of safety. Successful treatment of the conditions noted is, however, highly gratifying and more than adequate compensation for the risk inherent in this form of therapy.

SUMMARY AND CONCLUSIONS

1. Corticosteroid therapy has been found to be of value in several obstetric and gynecologic conditions including hyperemesis gravidarum, pelvic inflammatory disease, fistula repairs, and certain menstrual disorders.
2. This therapy may be of value in the maternal prophylaxis of erythroblastosis due to Rh incompatability.
3. Definitely beneficial results in the form of restoration of ovulation and fertility in the polycystic ovary syndrome and congenital adrenal hyperplasia have been shown.
4. Although low doses of corticosteroids are recommended, they are potentially dangerous and should be employed only with definite indications by physicians acquainted with their use.
5. Despite the hazards of such therapy, the beneficial results are often worth the risks taken.

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Re-evaluation of Inguinal Herniorrhaphy in the Infant and Child

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Some of the problems evolving out of experience with the surgical treatment of inguinal hernia in infants and children are presented, with special emphasis on the more controversial aspects.

IN 1951 before this Society, convened at Virginia Beach, I presented one hundred consecutive operations for inguinal hernia in infants and children twelve years in age or younger.[4] In the ensuing eight years a richer experience has accumulated, and from a survey of these cases certain changes in concept have evolved as well as strong substantiation of most of the basic and fundamental principles elaborated at that time. Coincident with an enlightening personal experience in this field there has been a change in the philosophy both of the profession and of the public in our medical community regarding this operation. For example, in the original communication it was stated that there was a reluctance for physicians to advise, and for parents to accept, early operation as a feasible and logical procedure. This fallacy has now been largely dispelled, as is well evidenced by the fact that although in the first reported one hundred operations, incarceration and/or strangulation occurred in 25%,[4] in the more recent group[3] this has dropped to 13.3% attesting to the increased incidence of *elective* herniorrhaphy as contrasted with emergency operation.

Another testimony to the increased medical appreciation of the problem anatomically is shown by the lessening number of cases referred to the surgeon with the diagnosis of "*hydrocele*". As was stated in 1951, *true* hydrocele is a rare condition in this age group, and fluid in the tunica vaginalis is almost invariably part and parcel of a co-existing hernia.[2,4,7,8] Twenty-five per cent of the original cases reported were referred with that diagnosis, but now almost never. Initially, one had trouble in convincing a parent that a six-week-old infant either merited or could withstand this rather innocuous procedure. Now they frequently come in requesting it, having friends, relatives or neighbors whose children have successfully undergone early-age hernioplasty. This improving attitude has tremendously lessened the surgeon's problem, not only with this specific procedure but with all pediatric surgery.

The present series is concerned with four hundred and sixty-six operations on four hundred and twelve patients recently reported[3] including the original group of one hundred operations on ninety-six patients. In this series there was essentially no difference from other reported ones on the side, sex and age. One exception is that there is not quite the preponderance of right-sided hernias over left-sided ones reported by most observers.

The technique has been varied only slightly during this interim. As to the incision, the transverse one in the distal flexon crease has completely replaced the oblique one previously reserved for the older child in whom the suprapubic fat pad had disappeared. As a matter of fact, because of the extremely favorable healing observed in children I have now adopted the transverse incision for inguinal herniorrhaphy in the adult as well. Exposure is excellent, healing prompt, and keloid tendency minimal. In essence, the technique employed is that previously described utilizing minimal dissection with high sac ligation and virtually no cord manipulation or disturbance. The importance of gentleness has been emphasized by Potts and others and it is essential that adult techniques not be used.[3,4,8] I do not believe that the distal sac should be dissected from its bed unless it is extremely short. To do so routinely is dangerous, time consuming, and embodies the likelihood of testicular and cord complications. In those rare cases where true hydrocele must be considered, it is necessary but this was occasioned only twice in the entire group. The importance of minimizing

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the length of the operation cannot be over-emphasized in the child, and not only is distal sac dissection hazardous but it greatly lengthens the procedure. As to time, the average side rarely exceeded twenty minutes. This is particularly important in this era of bilateral exploration. When there exists a localized collection of "trapped fluid" in the tunica vaginalis a small window is resected in the anterior portion, great care being taken to ligate all bleeding points lest hematoma formation occur. The parents should be advised that some residual swelling will be present under these circumstances. In *none* of the cases where the sac was simply *transected* and the lower end either ignored, or a window resected from the fluid-filled tunica vaginalis, was there suggestion of permanent hydrocele, abscess, or other complications referrable to this method of management. The distal serosa atrophies quickly after separation from the general peritoneum and hence in the majority resection would seem superfluous and ill-advised. A definite program as to skin closure has been evolved. A subcuticular suture of 4-0 or 5-0 fine eye catgut is employed on the child over one year and up to eight. The overwhelming advantage of not having to remove sutures more than compensates for certain slight objections to its use, these being:

1. More reaction in healing initially until catgut absorption is complete this being evidenced by moderate redness of the wound.

2. Serious infection is fortunately rare but should it occur with the continuous suture in place dissolution of the entire wound is usually necessary in order to effect drainage.

I have found no evidence that the employment of a subcuticular fine catgut suture predisposes to the development of infection. In the infant under one year, and the average child over eight years, there is no advantage to its usage, and hence the skin is approximated with fine interrupted silk.

In the interim since the first report there has been increasing evidence from various centers of hernia being present on the contra-lateral asymptomatic side where only one hernia presented.[1,6,10,11] This has in many instances necessitated a second procedure with its attendant risk, expense, and psychological trauma to the child, and I might add to the parents. There has, therefore, been an increasing number of these experienced observers who have advocated *elective* exploration on the clinically uninvolved side in the younger cases in order to obviate this problem. There is now agreement that in the good risk patient in the *younger* age group after uneventful repair of the obviously involved side, that the opposite one should be explored and the hernia if present repaired. To be considered a significant hernia sac, and one which will not spontaneously obliterate later, it should be 1.5 cm in length or longer. A small peritoneal protrusion is always present in infants but does not per se indicate hernia. This series would purport to show that *all children six years or younger* should be managed thusly. Out of three hundred and fifty-eight unilateral hernias, thirty-five returned with a contralateral one, an incidence of 9.7%. In the last two hundred and sixty-six patients with unilateral hernia thirty-four or 12.7% had to undergo subsequent surgical repair on the opposite side. Unquestionably these figures will ultimately be even higher considering the fact that the follow-up on many of these patients is so short. The big issue that has not yet been definitely evolved has been at what age one should stop doing elective contralateral explorations routinely when only one hernia presents. Kiesewetter and Parenzan have recently discussed that question in the Journal of the American Medical Association.[6] Although they arbitrarily chose two years as the top age limit for advocating this procedure, they state that "it is possible that with more studies in older children the indicated age group may be revised upward". *91.2% of the cases in my series recently reported occurred in children six years of age and younger.* 70.6% were under two years and in only 8.8% were the children over six years. An interesting and important fact is that 88% of the patients who eventually returned with a second hernia did so within two years of the first repair, a figure that compares with that of Clausen et al. who reported 80% within that period of time.[1] In our community where there is a constantly shifting population the incidence of contralateral hernias developing subsequently is unquestionably higher even than those figures would indicate. For the last twelve months I have been, therefore, doing bilateral explorations on all children six years and younger, and although not enough cases have accumulated to be of statistical import, there is early indication that a preponderance will show a significant sac on the opposite side. Only one female returned with a second hernia but I feel that possibly this philosophy should be adopted for both sexes.

RECURRENCES

The test of any procedure lies in the results. Out of this group of four hundred and sixty-six operations embodying a period of approximately ten years there were six or 1.28% operations for recurrence. However, four of these had the initial hernioplasty done elsewhere reducing the incidence to two cases or .4% of those done by me. More recurrences can be anticipated than shown by these statistics inasmuch as the time elapsing since surgery has been too brief to give an adequate interpretation of recurrence rates. I have been concerned by the possible cause of recurrence in this type of procedure for in each incidence a definite well-developed sac has been noted at the second operation, and one would have to assume that the sac had not been ligated completely, that the peritoneum had torn above the sac, or that the ligature had disintegrated in order to produce recurrence.

INFECTION

It was stated in the original communication that one of the fears of operation in this group had been that of infection. An amazingly low incidence has occurred there having been only two major infections and twelve others of low grade chronic type with suppuration and extrusion of silk for a fairly long period. The usage of the absorbable stitch did not in any way tend to increase the incidence of infection. Six and two/tenths per cent or twenty-three cases had testicular transplantation done simultaneously for undescended testicle. This did not seem to alter the infection rate. Formerly, as described in the first communication, an occlusive collodian dressing was applied. This has been abandoned in favor of a frequently changed dry gauze covering of minimal size attached to the skin with narrow adhesive plaster. Any occlusive covering tends to enhance the production of wound moisture with resultant maceration and concomitantly to further the development of infection if present. Likewise, it diminishes the likelihood of detection of early suppuration, and delays proper therapy for this complication. In keeping with modern conception of clean wound infection, I believe now that virtually all significant suppuration indicates operating room contamination, and that save for simple mechanical cleanliness, the postoperative management of the wound locally is of no moment. The staphylococcus has been invariably the offending organism.

CONCLUSION

Some of the problems evolving out of experience with the surgical treatment of inguinal hernia in infants and children have been presented with special emphasis on the more controversial aspects. The improvements noted over this period have been commented upon as well as substantiation of most of the basic principles elaborated eight years ago. Overall, the results have been excellent, the mortality nil, and the morbidity low proving the logic and justification for continuation of the operation, regardless of age.

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The Treatment of Angina Pectoris With Marplan (Ro 5-0831/1)

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Marplan demonstrated dramatic anti-anginal effects in a series of patients with severe angina pectoris. Materials, methods and results are discussed.

THE management of angina pectoris remains a difficult problem, all available treatments, medical or surgical, having only limited value. Nitroglycerin though rapid acting and effective in the majority of patients, may be required in frequent doses and provides only short lived relief. The so-called long-acting coronary dilators similarly fall short of the desired action. All those interested in cardiology have long been seeking an effective and safe agent that may be used *prophylactically* against anginal attacks particularly in severe cases.

First Cesarman in Mexico[1,2] and later Cossio[3,4] in Argentina obseved that iproniazid (Marsilid)(R)* an amine oxidase inhibitor used in the treatment of depressions, afforded a marked and prolonged beneficial effect on anginal pain. Objectively, this could be demonstrated by an improved capacity for effort and reduction in nitroglycerin requirements. Subjectively there was either complete prevention of pain or a reduction in the frequency, intensity and duration of attacks. Because of potential toxicity and frequency of unpleasant side effects, research was directed toward the development of more specific, less toxic derivatives. An analogue, Marplan (Figure I) which became available to us for clinical trial in 1958, has been shown to be six times as potent as Marsilid in inhibiting amine oxidase *in vitro* and thirty times as potent *in vivo* as measured by the amine oxidase activity of rat brain. Thus, smaller dosages may achieve a desirable therapeutic response with a significant reduction in side effects.[5] The serious toxic effects reported with other amine oxidase inhibitors have not been observed with Marplan.

Griffith,[6] reported notable benefit in over 70 per cent of a series of anginal patients, about one-half of whom were severely ill. The response to medication was judged by intensity of pain, average number of daily anginal attacks and the number of nitroglycerin tablets used. He reported that in general the patients felt better under Marplan medication than previously and that they were more alert, more cheerful and could do more.

The present investigation was undertaken to determine the effect of Marplan in a series of patients with severe angina pectoris.

MATERIAL AND METHODS

Twelve patients with severe angina pectoris were administered 10 mg. of Marplan three times a day after meals. All patients had proven myocardial infarctions within the past five years and required five to fifteen nitroglycerin tablets a day for relief of anginal pain. In addition, all subjects had taken either pentaerythritol tetranitrate, erythrityl tetranitrate or aminotrate phosphate at some time. Two patients were considered neurotic.

RESULTS

Remarkable improvement was observed in ten of the twelve patients treated with Marplan. The patients had a sense of well being and were able either to eliminate nitroglycerine entirely or reduce the dosage to one or two tablets a day. Neither of the two neurotic patients obtained relief.

There was no clinical evidence of liver toxicity or other side-effects throughout the nine month period of investigation. At the present time every patient insists on continuing medication with Marplan.

DISCUSSION

The precise action of amine oxidase inhibitors on either angina pectoris or mental depression has not

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been established. It has been postulated that these agents inhibit the enzyme, amine oxidase, which is responsible for the breakdown of certain biologic amines such as serotonin, nor-epinephrine and epinephrine, thus allowing them to accumulate in brain and heart tissue. When used prior to reserpine administration, they sharply reverse the effects of reserpine. Crumpton et al[7] have shown that infusion of serotonin to dogs results in a lowering of blood pressure, decreased peripheral resistance, and a twenty per cent increase in the ratio of coronary blood flow to left ventricular work. However, whether the anti-anginal effect is due to the action of serotonin remains speculative. As to electrocardiographic changes, Cesarman,[2] noted improvement in the pattern. However, others report that no EKG changes result from amine oxidase inhibitor administration. Still another consideration is that the blocking of pain may be associated with the psychostimulant action of these drugs.

With the evidence that this analogue of Marsilid is non-toxic it would seem that Marplan is an ideal long-acting drug, unusully effective in angina pectoris. It certainly should be added to our armamentarium for the treatment of chronic coronary disease. It is amazing as well as gratifying to note the dramatic improvement in patients with severe angina who have depended on nitroglycerin for so many years and who now not only have relief of pain but at times have become rehabilitated by the use of this drug.

SUMMARY

Marplan (1-benzyl-2-(5-methyl-3-isoxazolylcarbonyl) hydrazine) demonstrated dramatic anti-anginal effects in 83.3 per cent of a series of patients with severe angina pectoris. The patients all of whom previously required five to fifteen nitroglycerin tablets a day were able to eliminate the nitroglycerin entirely or reduce the daily dosage to one or two tablets. They experienced a sense of well being and insisted upon continuing medication.

No evidence of toxicity was observed at the effective therapeutic dosage level of 10 mg. three times a day during the nine months of investigation. While the present series is admittedly small, Marplan appears to be a most effective drug available for the prophylactic management of angina pectoris.

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Cystosarcoma Phyllodes

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A forty-five year old woman, whose chief complaint was enlargement of the right breast. The diagnosis was cystosarcoma phyllodes (giant intracanalicular fibroadenoma).

CYSTOSARCOMA PHYLLODES while not a rare breast tumor is both an uncommon and interesting one. This tumor is generally classified under the general class of fibro-epithelial tumors or adenofibroma. There are many synonyms, e.g., adenocystosarcoma, adenoma cystosarcomatoids, adenomyxoma, etc. Astley Cooper, 100 years ago, called it a "chronic mammary tumor." The term cystosarcoma phyllodes was first used by the German, Johannes Müller, in 1838, and at that time the term sarcoma indicated a fleshy mass. The term is retained, but erroneously is given a malignant interpretation.

The name depends on the predominating elements, e.g., fibro, adeno, myxo, when highly cellular and cystic—cystosarcoma; if duct-like spaces are present —intracanalicular fibroadenoma.

There is a similar age incidence in all. The one sub-class of adenofibroma is the giant adenofibroma or cystosarcoma phyllodes.

Three forms have been described:

1. Simple cystosarcoma
2. Proliferating cysts on pedicles-cystosarcoma proliferans
3. Cystosarcoma phyllodes showing warty excrescences.

The tumor itself is a large, firm mass, has an uneven surface, cavities or clefts, laminae or excrescences of a foliated or wart-like form sprouting from the bottom of cavities and filling up the interior.

This tumor constitutes about 2% of adenofibromas of the breast. Adenofibroma is the third most common breast tumor (carcinoma and cystic disease being the first and second in occurrence).

Only 36 cases were seen at Presbyterian Hospital in New York City from 1912 to 1952. At Louise Obici Memorial Hospital from 1951 to 1958 there was a total of 246 breast tumors, 56 malignant, 190 benign and one case of cystosarcoma phyllodes. Stout places all adenofibromas in this class where unusually cellular stroma is suggestive of sarcoma. He excludes any tumor in which no epithelial component is demonstrated—the usual types, fibro, lipo, and myxosarcoma should thereby be distinguished from cystosarcoma.

CHARACTERISTICS

This tumor occurs at a later age than ordinary adenofibroma, 45 years and upward compared to 33 years for adenofibroma. It occurs earlier in colored females than in white, and the all-over occurrence is greater in colored females.

CLINICAL FEATURES

There is a strikingly rapid growth and the tumor may attain enormous size—may burst and show suppurating fungus on the surface. Swelling of lymph nodes may occur, but this is usually due to irritation and subsidies postoperatively. They are sharply delineated in breast tissue and relatively movable, rounded and lobulated. They do not produce retraction signs.

GROSS PATHOLOGY

Varying degrees of firm opaque tissue and soft gelatinous tissue interspersed with cysts. The cysts are often filled with branch-like polypoid masses of firm tissue projecting into the cystic spaces.

HISTOLOGICAL

Here a great variation may exist. The general stromal epithelial pattern runs the gamut from pericanalicular cellular adenofibroma through intracanalicular adenofibromas with cellular stroma and distorted ducts lined with flat epithelium to tumors with such marked stromal growth that no epithelial component can be found. Myxomatous areas are always seen.

Presented at the meeting of the Virginia Surgical Society, Williamsburg, May 2, 1959.

CLINICAL COURSE

Whether to treat this tumor as malignant is debatable. Some authors do so. Treves and Sunderland (quoted by Haagensen) noted 18 malignancies out of 77. Stout found only two out of five metastasizing tumors could be classified as malignant. It is unsafe to rely for guidance upon criteria as applied to biopsy specimens. Some sections show highly malignant looking areas yet have a benign clinical course. At Presbyterian Hospital, New York City, only one out of 36 (2.8%) were known to have metastasized and the other 35 were clinically benign. Nine had areas of anaplastic stroma classified histologically as malignant but controlled by surgery.

They regarded cystosarcoma phyllodes as benign and the treatment was simple excision or mastectomy.

CASE REPORT

M.E.C. This 45 year old colored female was admitted to Louise Obici Memorial Hospital on July 7, 1958.

Her chief complaint was enlargement of the right breast. She first noticed some increase in size in the summer of 1956, followed by gradual growth until January, 1958, when some slight discharge from raw area occurred. She did not go to see a physician until just prior to admission. There had been no loss of weight and her appetite had been good. In February, 1958, she had a hysterectomy for fibroid tumors.

On physical examination all findings were within normal limits except for the right breast. The left breast was of normal size and consistency. The right breast was almost twice the size of the left, nodular, and showed several cystic areas, one small ulcerated area was noted mesial to the nipple. No retraction of the nipple nor dimpling of the skin was present. The laboratory studies revealed no abnormal findings. On July 10, 1958, three days after admission, under pentothal, nitrous oxide and oxygen and ether anesthesia, a simple right mastectomy was done. Due to some tension in bringing skin margins together, a skin graft from the epigastric region to the denuded area was accomplished. One Penrose drain was used. An uneventful convalescence ensued. The wound healed well and the skin graft was satisfactory. The patient was discharged to the care of her physican on July 30, 1958.

PATHOLOGY REPORT

Diagnosis: Cystosarcoma phyllodes (Giant intracanalicular fibroadenoma).

Gross: The specimen submitted for examination consists of the right breast removed by simple mastectomy. The skin and nipples are attached. Adjacent to the nipple is an area of ulceration. The breast is greatly enlarged and on sectioning beneath the skin there is a large lobulated, fibrous, gritty tumor showing areas of cystic degeneration. The entire specimen measures 22 by 23 cm. The tumor occupies most of the submitted breast tissues.

Microscopic: Sections through the tumor from the breast reveal an interesting picture. For the most part the tumor is made up of spindle-shaped fibrous cells which are uniform in type. In many sections there is hyalin degeneration and here the nuclei are relatively sparse. After multiple sections have been



Fig. 1

obtained in one area there is noted along one edge remnants of a ductal system in which the ducts are elongated and giant in form. They are relatively benign but do show piling in some instances. Scattered throughout the multiple sections, the material appears to be almost early cartilagenous. In these areas there is a homogenous hyalin base with the nuclei surrounded by clear film.

COMMENT

The term cystosarcoma phyllodes without qualification according to Stuart does not denote a malignant tumor in his laboratory. The term has stemmed from the word cystosarcoma, first recorded by Müller in 1838. These tumors do become malignant but their differences from the typical fibroadenoma are: (1) giant form; (2) the size of the intra-

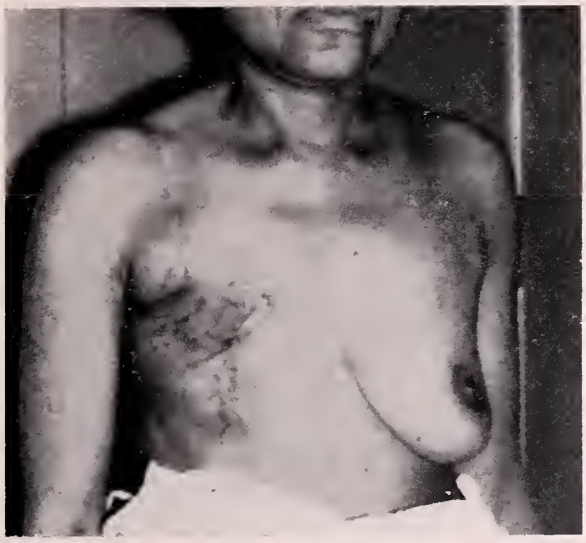


Fig. 2



Fig. 3. Gross Specimen

canalicular components. It is pointed out by Stuart that usually the lymph node enlargement is secondary to irritation and will usually subside following mastectomy. If multiple sections are taken through the area, occasionally one comes upon a section which may be undergoing early malignant change, therefore, even though the tumor is usually classified as one of benign origin, because of this fact and its size, should be viewed with some caution since occasionally these tumors will, in rare instances, metastasize. When they do, they usually metastasize to the lungs first.

The clinical course since discharge has been without incident. Examination on March 2, 1959, showed no evidence of recurrence nor axillary lymph node enlargement.



Fig. 4. Microscopic

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Pyloric Obstruction Due to Biliary Calculus

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FRANK W. GEARING, Jr., M.D.
Harrisonburg, Virginia

This is apparently a rare condition and the available literature is scarce. A case report in a 62 year old woman is presented with complete recovery following operation.

PYLORIC OBSTRUCTION due to gall stones apparently is a rare diagnosis. We have had such a case recently in our hospital. We have attempted to abstract the literature which has not been voluminous.

The incidence of biliary fistulas is greater than is generally thought. The range of occurrence is from .5% to 5%. The most common hollow viscus is the duodenum, the least common is the stomach.

Judd & Burden reported 153 cases, six with the stomach involved.

Dean reported 29 cases, one with the stomach involved.

Hicken and Carrey reported 272 cases of gall bladder fistula of which 4.4% were of the stomach. 1.2% of the patients admitted to the University of Iowa hospital between 1915 and 1939 had biliary fistula. Of 29 cases 24 were totally cholecystoduodenal, 1 cholecystogastric, and 1 choledochoduodenal.

In the days preceding modern surgery fistulous communication between the biliary tract and other viscera were regarded as pathological curiosities. A review of older books has revealed gall stones being vomited up, coughed up, and obtained with a stomach tube. Faber reported a woman voiding 13 gall stones. Gall stones have been reported impacted in the male urethra. They have formed a fistula with the pregnant uterus, and an ovarian cyst has been found to be in communication with the gall bladder.

Symptoms usually accompany long standing biliary disease. 85%-90% of the biliary fistula were due to calculi. 5%-6% were due to peptic ulceration. The average history reveals repeated attacks of biliary disease. The longer the duration of the disease, the greater the likelihood of fistula. The symptoms did not differ materially from the usual symptoms of gall bladder disease.

Pathogenesis—After repeated attacks of acute inflammation the gall bladder or bile duct became adherent to the nearest portion of gut. The first portion of the duodenum, the proximal end of the transverse colon, and the pyloric end of the stomach are the most prominent sites. During an acute attack, perforation of the adjacent gut occurs. Fistulas occur more commonly in women than men, the ratio being 16-1. The usual age is in the 6th and 7th decades. The mortality is rather high due to the age, obesity, frequency of masking symptoms referable to the biliary system, and to the fluid and chemical imbalance.

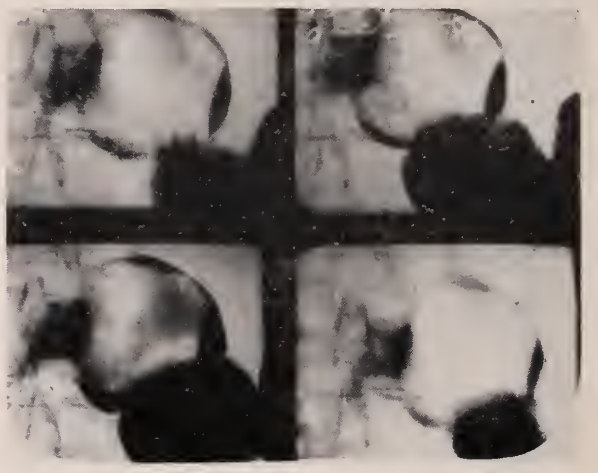


Fig. 1. This is a series of spot films showing the large defect in the pyloric end of the stomach due to the calculus.

CASE HISTORY

Mrs. M. B. B., 62 year old female, was admitted to the Rockingham Memorial Hospital on the 8th of October, 1958, at 3:45 P.M. Her present history dated back one month at which time she began to vomit and complain of pain after eating solids at meals. Fluids did not seem to disturb her. There was absolutely no previous history of indigestion,

heart burn, epigastric pain, intolerance to fatty foods, of any other type of digestive disturbance that could be elicited. Past medical history was not remarkable.

Physical examination revealed a well developed, well nourished, elderly white female in no acute distress. The examination of the EENT system was essentially normal. Chest and heart were within normal limits. Blood pressure 140/80, pulse 84, respiration 24. There was slight tenderness in the right upper quadrant on deep palpation, but no masses were felt. The liver, spleen and kidneys were not palpated and there was no abdominal spasm demonstrated. Examination of the rectum and vagina was entirely normal and the extremities were entirely normal, with the exception of partial loss of motion of the left hip which was the result of an old injury. The patient was placed on gastric suction with relief



Fig. 2. P.A. projection of the entire stomach showing the relation of the calculus to the pylorus and remaining stomach.

of the nausea and vomiting, but this was only temporary. On October 9, she was sent to the x-ray department for upper G. I. series. At this time the swallowing function was seen to be entirely normal. No esophageal lesions were noted. The stomach lay high and transverse in the abdomen, and filled satisfactorily down to the pylorus. In the pyloric end of the stomach there was a constant filling defect the size of a small lemon, 3.5 by 3.8 cm., which filled practically the entire pyloric end of the stomach and expanded the pylorus. This mass was smooth and was not movable. Barium passed around this mass and the duodenal bulb did not appear to be unusual. With the patient erect, in addition to the large space occupying mass, a smaller smooth space occupying mass was seen proximal to this. From the x-ray standpoint the diagnosis was thought to be that of a bezoar. A four hour follow-up film showed only a moderate amount of retention in the stomach. The head of the meal had reached the cecum and appeared to be passing through the small bowel normally.

Routine laboratory procedures showed the follow-

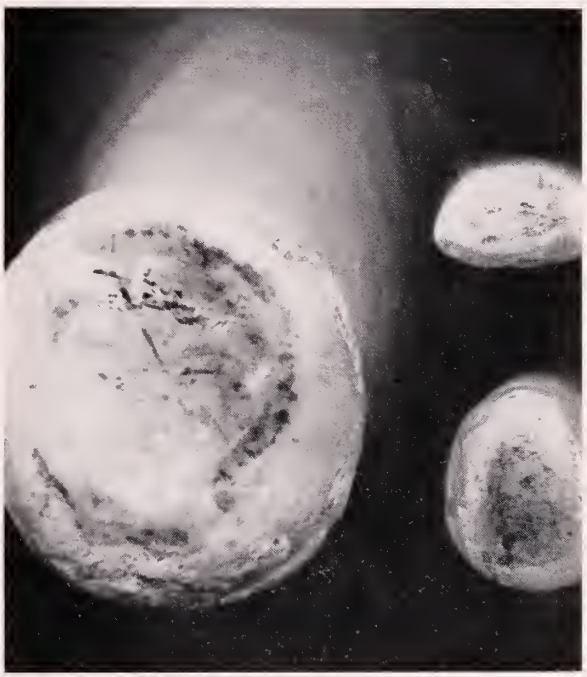


Fig. 3. Stones removed at the time of operation. The larger one measured 3.5 by 3.8 cm., and the smaller ones 2 by 1.5 by 1 and 1.5 by 1 by .8 cm.

ing results: Urinalysis clear, reaction 6.0, specific gravity 1.005, no albumin, no sugar, 6 to 8 pus cells per high power field. Hematocrit was 40%, hemoglobin 13.8 gms., 4,950 WBC, 74 polys, 23 lymphs, 3 mono. Blood sugar 96 and BUN 6.8. The Wassermann was negative.

The patient was cross matched for blood and scheduled for an exploratory laparotomy on 10/13/58. Pre-operative diagnosis was foreign body in the stomach. Under general anesthesia the abdomen was opened with the midline incision. The mass was felt in the pyloric end of the stomach. The stomach was opened longitudinally and a large gallstone which measured 3.5 by 3.8 cm. was seen wedged in the pyloric canal. Two smaller stones measuring 2 by 1.5 by 1 and 1.5 by 1 by .8 cm. were also found loose in the stomach. There were considerable ad-

hesions between the gallbladder and the stomach suggesting the possibility of a cholecystogastric fistula. This was proven to be correct at the time of exploration, and one of the two smaller stones recovered was seen lying in this fistula protruding into the lumen of the stomach. Not knowing the condition of the common duct, the fistulous tract was left alone. The stomach was closed routinely in layers, leaving one cigarette drain present. The patient was returned to her room in good condition.

Pathology report showed the densities to be cholesterol stones.

The patient had an uneventful recovery and was discharged from the hospital on the twelfth postoperative day.

CONCLUSION

An interesting case of pyloric obstruction due to biliary calculus has been presented. A review of the literature available has also been made. Several interesting observations were made.

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Smog and Emphysema

Los Angeles smog aggravates at least one serious lung disease and a filtered air system should be used to alleviate the problem, according to three University of Southern California researchers. Writing in the November 14 Journal of the American Medical Association, Drs. Hurley L. Motley, Reginald H. Smart, and Charles I. Leftwich said the severity of emphysema is aggravated by the type of smog that occurs in Los Angeles.

They pointed out that the composition of smog in Los Angeles differs from that found in other cities, such as St. Louis, Pittsburgh, or New York. There is no coal smoke in Los Angeles where the major source of smoke is the exhaust from three million cars.

No important lung changes were observed in those with no significant emphysema during studies conducted over a three-and-one-half year period.

The researchers also found that there was a lag of two days before the severest effects of the smog were felt by the emphysema sufferers.

Activated carbon filters were recommended for use both at home and in the office by patients with severe emphysema residing or working in smoggy areas. "The adverse effect of smog as demonstrated in this study provides a rational basis for the use of carbon filters and justifies their expense."

Significant improvement was noted in persons with severe emphysema after filtered air was supplied to replace the smoggy air. The researchers said 40 to 50 hours were required "to obtain the maximal reversal of the changes resulting from prolonged breathing of smoggy air."

The studies were conducted with the cooperation of 66 volunteers. Forty-six of the volunteers had emphysema.

"Although the eye-irritating effect of smog is often obvious in the Los Angeles area, the presence of a significant deleterious effect on breathing has not been so generally recognized."

"The major health problem at present relates to the effects of the pollutants in the atmosphere at lower concentrations than the alert level (0.5 ppm of ozone) and for prolonged periods of time."

Lead Poisoning

SIDNEY KAYE, Ph.D.
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Acute severe or fatal lead poisoning is relatively rare. However, it is still with us, especially in children. Symptoms, identification and treatment are discussed.

LEAD IS UBIQUITOUS, because of its many common uses it may be found anywhere. Although there appears to be less (serious) lead poisoning than in previous years, it is still with us, especially in children.

LEAD (PLUMBUM)

Derivatives: Lead Acetate (sugar of lead); other lead salts and oxide; lead tetraethyl.

Uses: Paints, storage batteries, gasolene additive, ceramics, chinaware (especially unglazed), alloys, insecticides, vulcanized rubber, plumbing, lead toys, solder, bullets, etc.

Properties: Toxic heavy metal usually forming white crystalline compounds. Lead tetraethyl is a liquid. Even some insoluble salts may be changed by gastric juice into soluble absorbable compounds. *Acute MLD:* Soluble lead salts, approximately 10 Gm/150 pound man. Lead tetraethyl 100 mg/150 pound man.

Acute severe or fatal lead poisoning is relatively rare; however, acute exposure might lead to the production of classical chronic phenomena.

Remarks: Cumulative poisoning or chronic intoxication occurs when absorption exceeds elimination and usually presents typical signs and symptoms. Lead is absorbed through all portals especially if soluble or in fumes. Children are especially susceptible and usually may show signs of encephalitis (convulsions) which occur in adults only rarely. Following absorption, lead is stored in the bones as phosphate. High calcium tends to favor storage; low calcium releases it into the blood. Also, acid-base shift similarly effects mobilization-storage. Lead stored in bones is always potentially dangerous because at any time (even mild acidosis) conditions may occur which put lead into the circulation in excess, with the production of symptoms.

Symptoms: Metallic taste, gastro-intestinal irritation, nausea, persistent vomiting, abdominal pain, diarrhea, malaise, anorexia are evident in the acute stages.

Delayed stages of chronic exposure may show avitaminosis, loss in weight, foul mouth odor with stomatitis, black gum line, severe colic, anemia, increase in reticulocytes, basophilic stippling, jaundice, coproporphyrins in urine, constipation alternating with diarrhea, possible hepatic, kidney or pulmonary damage, central nervous system damage, mental aberration, arthralgia, especially at night, wrist or foot drop, encephalitis (especially in children) also occurs in adults with lead tetraethyl), peripheral neuritis, collapse, coma, death.

Identification: Urine or blood may be used for analysis.

Soft glass containers and rubber stoppers contain lead and would contaminate specimen.

(1) Most chronic cases would present:

   (a) Positive lead shadow on x-ray of long bones in children;

   (b) Positive basophilic stippling in blood smear;

   (c) Positive coproporphyrins in urine: Two ml. of urine (should be acidic), 1 ml. of buffer solution (one part of saturated sodium acetate plus 4 parts of acetic acid). Add 5 ml. of ether and shake well. Read under an ultra violet lamp with Wood's filter (3660 A°), positive reaction produces a striking fluorescence. This test is negative in acute poisoning. Versene (such as Calcium

This is one of periodic articles on common poisonings which will be published in the Monthly from time to time. It is prepared by Dr. Kaye in collaboration with the Richmond Poison Information Center.

disodium versenate) interferes with this test. An alcoholic "binge" may give false positive results.

(2) Determination of lead levels in the blood or in a 24 hour urine output.

Approximate normal levels for lead:
Blood: below 0.06 mg/100 ml.
Urine: below 0.08 mg/diem.

Levels above these ought to be regarded as indicative of possible lead poisoning cases. Sometimes blood or urine levels may not be as high as expected. This may be due to alkaline treatment and an alkaline shift, which at this time may be demobilizing and depositing the lead into the bones. Giving small doses of Calcium disodium versenate in these cases will usually yield a *very high* lead level in both urine or blood. Occasionally a chronically elevated lead level in the urine (up to 0.300 mg/diem) may be encountered and some few persons may not show clinical signs or symptoms of poisoning. In these cases a high exposure may increase urinary output without associated symptoms.

Treatment: In acute poisoning induce vomiting or do a gastric lavage. Administer demulcents such as white of egg or cream or milk. Purge with sodium sulfate, 15 grams in ½ glass of warm water. Demobilize lead from blood into the bones with an alkaline diet and calcium gluconate or lactate or sodium citrate intravenous plus vitamin D.

Keep bowels open, exercise, massage, adequate diet.

Symptomatic treatment plus supportive treatment for possible liver and kidney involvement.

Specific treatment of choice is the disodium calcium salt of ethylene diamine tetra-acetic acid (Calcium Disodium Versenate or Ca Na_2EDTA). The usual method of administration is as follows:

Dilute the contents of one 5 ml. ampul (1 gram) with 250 to 500 ml. of Solution Isotonic Sodium Chloride, USP, or sterile 5% dextrose solution suitable for intravenous injection. Administer this diluted solution by intravenous drip over a period of one hour. Such doses may be administered twice daily for periods up to 5 days. The therapy should then be interrupted for 10 days, and if necessary, followed by an additional 5 days of treatment.

For children, the dose should not exceed 0.5 gram per 50 pounds of body weight, given twice a day.

Analyze urine for lead to determine when normal. Normal lead in urine is less than 0.080 mg per 24 hours. Prompt improvement usually follows, and in children the encephalopathy subsides and usually does not recur.

Treatment for chronic plumbism is the *same* as described above. If the patient was treated promptly and did not develop any increased intracranial pressure or any nerve damage then prognosis is favorable, and most likely there will be no mental sequelae.

Versene compounds have been reported (under rare circumstances) to be nephrotoxic. Course of therapy should therefore be short, and patient's renal status should be evaluated before, during, and after therapy.

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State Health Department
Richmond, Virginia

Correspondence . . . .

"Everything Is Getting Black", the Death of a Poet.

To The Editor:

In a previous communication,[1] certain aspects of atypical coronary artery disease were discussed. Certain events which preceded the recent and sudden death of a close friend served to emphasize the observations already made.

A.C.E., 60, W.M., was well known as a poet. Unmarried, he lived alone in a cabin near Halifax. A long standing disease of the retinae had caused him to avoid strong light, within his cabin and outside. He had been in good health except for an episode of 11-16-55 when, while in a barber's chair, he broke into a cold sweat, vomited and collapsed. He was admitted to a local hospital where the usual studies including two electrocardiograms were normal.

On 11-3-59 the patient came to office in late afternoon for an influenza inocculation. Before leaving he remarked, "I have a muscle pain in my left chest. I have had it about twenty-five years. It came after I had sawed on a limb." This statement left me perplexed. This man had dropped in the office many times to talk to me, had ridden with me while I was making country calls and I had visited him many times at his cabin and this was his first account of any chest pain. I could not figure it out.

Shortly after 8:00 P.M., on 11-4-59, the patient called my home saying he had pain in his chest. I reached his cabin close to 9:00 P.M. He called me to come in, put on an eye shade and turned on a dim light. Propped on his right arm on his bed, he gave me the following account of the events of the evening: "There was a new dog in a pen near here. It was making a good deal of noise. I went down with a switch. I didn't intend to whip the dog but I got excited. My chest began to hurt. My chest has been hurting. It hurts when I walk fast, I can make it stop by slowing up."

Here a light began to dawn for me. I told him I thought he had coronary insufficiency, suggested that he read the article previously mentioned, as he had a reprint of it. He asked, "How could I have had heart trouble for twenty five years?" A moment or so later he said "Everything is getting black as the Dickens." With that he collapsed on his right side. I thought at first that it was another case of syncope such as had taken place in 1955. It was all over. He had remarked that the pain had gone to his right wrist. There had been no complaint of severe pain, no complaint of dyspnoea. There had been no unusual excitement, only an account of what had happened.

I had not had time to open my bag, had not begun any physical examination; only had had the occasion to hear a writer describe his own fatal heart attack.

Nathaniel H. Wooding, M.D.

1. Abdominal-Thoracic Pain. Virginia Medical Monthly, November, 1957.

November 19, 1959
Halifax, Virginia

Sometime

Sometime, when you're feeling important,
Sometime, when your ego's in bloom,
Sometime, when you take it for granted
You're the best qualified in the room,
Sometime when you feel that your going
Would leave an unfillable hole,
Just follow this simple instruction
And see how it humbles your soul:
Take a bucket and fill it with water,
Put your hand in it, up to the wrist,
Pull it out, and the hole that's remaining,
Is a measure of how you'll be missed.
You may splash all you please when you enter,
You can stir up the water galore,
But stop, and you'll find in a minute,
That it looks quite the same as before.
The moral in this quaint example,
Is do just the best you can,
Be proud of yourself, but remember,
There is no indispensable man!

—"Supervision" February 1951

The Medical Society of Virginia . . . .

Social Security Question

All over the nation physicians are asking the question "should doctors seek coverage under the Social Security program"?

The Medical Society of Virginia has been keenly aware of the discussions on the question which have continued unabated over the past several years. In an effort to present both sides to the membership and better enable each physician to arrive at a decision, a panel discussion was presented during the 1959 annual meeting in Roanoke.

In this connection, the House of Delegates, on October 6, adopted the following resolution:

> Be It Resolved that following publication in the Virginia Medical Monthly of the panel discussion on Social Security, The Medical Society of Virginia will conduct a poll of the registered physicians in Virginia. The ballot will state that the extension of Social Security coverage to physicians would be compulsory and irrevocable as long as Social Security remains national policy.
>
> The results of the poll will be binding on the Delegates to the AMA if there is majority vote pro or con of the membership of The Medical Society of Virginia.
>
> Ballots will be signed and names checked against The Medical Society of Virginia roll.
>
> The questionnaire would read as follows:
>
> 1. Are you a member of The Medical Society of Virginia?
> 2. Are you now in active practice?
> 3. Do you favor compulsory Social Security coverage of physicians? Yes___ No___
>
> Valid only if signed.
>
> SIGNED: _____

The proceedings of the panel discussion are now presented. The poll directed by the House will be conducted within the next few weeks.

The Social Security Program

M. D. DEWBERRY
Charlottesville, Virginia

The Social Security program has now been in effect for almost 25 years, and it covers practically everyone who is gainfully employed. The principal exceptions are members of the medical profession and civil service employees—the groups you and I represent. As a matter of fact, many members of each of these groups are now covered because of some other type of employment or because they are self-employed.

As you know, the Social Security Act was enacted in 1935 by the 74th Congress, and none of the succeeding 12 congresses has impaired any of its basic characteristics.

What are the basic characteristics of the Social Security program?

The first important characteristic of contributory social insurance is the fact that the individual's right to a benefit—and therefore the security of his family—grows out of his own work. In the early days of the program we heard a lot of criticism about governmental handouts. This criticism was often applied to Social Security, notwithstanding the fact that the very essence of the program is to relate the individual's benefit to his prior service in the economy. As you know, in Social Security the question of whether you get a benefit and how much you get is related to your own contribution to production.

Basically, the Social Security rights of the individual—the insurance protection he has against loss of earned income—comes automatically from the fact that he is working. This "earned right" concept is not only desirable for a healthy economy but is good for people's incentives. As contributors, they feel a sense of responsibility and pride. It is important to have people feel that Social Security is their program—to recognize that Social Security is collecting and paying out their money and what happens to the program is important to their future.

The program is also related to work in another way. It provides retirement income, not simply an accrued annuity, and so if an individual is only partially retired, or if he goes back to regular employment, he does not receive a full benefit. His benefit may be suspended for all, or a part of the years, in which he is not fully retired. It is also related to work in the sense that it appreciates the need to encourage beneficiaries to take on available employment opportunities—whether they be older workers or disabled workers seeking rehabilitation. Again, it is healthy for the individual, healthy for the econ-

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omy, and certainly healthy for the status of the trust fund in which all workers have a vital stake, to make sure that people are encouraged to be producers of goods rather than consumers of benefits.

The second fundamental characteristic of the Social Security program is that it is intended to provide a base of security that is thoroughly consistent with individual savings and that encourages other types of income protection. In contrast to public assistance where recipients must demonstrate actual need, Social Security benefits are paid to the individual or his dependents solely because of wage loss (or withdrawal from substantial self-employment activity) without requiring a "means test" or an investigation of the beneficiary's resources. As a result, under Social Security, the incentive to earn and save throughout one's life is not stifled. Home ownership, savings, insurance annuities and company pensions, etc. are no bar to the receipt of Social Security. Thus, Social Security gears easily into our free enterprise system—the individual is rewarded for building for himself a more prosperous and attractive existence.

Still another basic characteristic of Social Security is that the rights of the individual are objective and defined specifically by law. It is important for an individual to know well in advance whether he will get a benefit, and if so, how much. A man who specifically knows under what conditions he can get benefits is able to plan ahead. Part of his fear of the future is relieved. This should release productive energy. Under Social Security, the individual has an enforceable right. Objectivity in law is an important one that we need to be especially concerned about in the area of disability. In disability we face the greatest problem in reducing the individual's rights to specific definable, predictable considerations.

A final characteristic of the program that has proved to be tremendously important in our dynamic economy is that Social Security is responsive to changing standards of living. Since it is compulsory, contributory, and wage related, the contributions paid are, at least in part, responsive to increasing wages and self-employment income. As wages have gone up, contributions have gone up, limited, of course, by the wage ceiling, (recently moved up from $4200 to $4800). The Social Security benefit formula responds in part to increasing wages and levels of living—since benefits are paid on average monthly earnings. When earning levels go up, the average wage goes up (again within the limits of the $4800 ceiling).

Congress has seen fit to increase Social Security benefits from time to time, not simply because of inflation. These increases have also afforded Social Security beneficiaries a chance to share in our rapidly increasing national wealth and popular well being.

GROWTH IN NUMBER RECEIVING PAYMENTS

The original Social Security Act of 1935 provided only for retirement benefits payable to qualified persons at age 65 or over when they retired from work.

Monthly payments for dependents and survivors were added by the Social Security amendments of 1939. The first monthly benefit under the program was paid in January 1940.

At the end of 1940 the number of monthly benefits being paid was just a little over 200,000. The one million mark was reached in July 1944, and by September 1950 three million persons were getting benefits. At that time Congress changed the Social Security Act to extend coverage, raise benefits, and make more persons eligible for payments. Two million more beneficiaries were added to the Social Security rolls in the next two years. By December 1952 there were five million beneficiaries on the rolls.

In 1954 Congress again extended coverage, increased benefits, and liberalized the conditions under which a person could receive payments. By the end of January 1956, the eight million mark had been reached.

Since then more than five million people have been added because of normal growth of the program, the 1954 amendments which extended Social Security protection to self-employed farmers, and the 1956 amendments which lowered to 62 the age at which women could receive benefits.

The 1956 amendments also extended coverage and provided for payments to severely disabled people between the ages of 50 and 65 beginning with July 1957, and under certain conditions, to persons over 18 who became disabled before reaching that age and who are sons or daughters of retired or deceased workers.

The most recent major amendments, approved by the President on August 28, 1958, added benefits for the dependents of disabled persons who are receiving payments and made a few other changes in the law.

Nationally, there are now over 13 million persons receiving payments totalling about 10 billions of dollars annually.

COVERAGE AND PROTECTION

Today the Social Security System provides in-

surance protection for most American families. Ninety per cent of all paid work in the country is covered by the program and 74 million persons are now insured. Over one-half of them are permanently insured and will qualify for Social Security benefits for themselves and their dependents and survivors even if they do not continue in jobs covered by the law.

Nine out of ten mothers and children in this country are guaranteed survivorship payments under this program in case the breadwinner dies, and almost two million are now receiving Social Security monthly payments.

Approximately 70 per cent of the 15 million persons over 65 in the country are eligible to receive monthly payments.

WHAT SOCIAL SECURITY MEANS

Social Security means payments after retirement, payments to families in case of the worker's death, or protection to the worker and his dependents if he becomes totally and permanently disabled.

WHO RECEIVES SOCIAL SECURITY PAYMENTS

Benefits are paid not only to a retired worker but also to his dependents—to his wife when she reaches age 62 (or a dependent husband at age 65), to their children under age 18, and after age 18 if the child became permanently and totally disabled before that age. Benefits are also paid to a wife at any age when she has a child beneficiary in her care.

When the worker dies, survivors benefits are paid to children under age 18, to severely disabled children after age 18 if their disability began before that age, and to their mothers as long as they have such children in their care. Aged widows of insured workers are eligible to receive benefits at age 62. Benefits may also be paid to aged dependent parents, and to widowers at age 65 if the husband was dependent on his insured wife at the time of her death.

WHO RECEIVES DISABILITY PAYMENTS

Benefits are paid when a worker between the ages of 50 and 65 has an extended disability which is so severe as to incapacitate him for any substantial gainful activity. The worker must meet the requirements of extensive work in covered employment before the onset of his disability. The disability must be medically determinable and must be expected to be of long-continued and indefinite duration or to result in death. Benefits are also paid to the dependents of workers receiving disability benefits.

AMOUNT OF PAYMENTS

Benefit amounts depend on the worker's average monthly earnings from employment and self-employment covered by the law. The worker's own monthly benefit is determined from a table in the 1958 amendments based on his average monthly earnings. Beginning in 1958, his benefits range from $33 to $127 a month because up to $400 average monthly earnings may be used. If a woman (either a worker or wife) qualifies for benefit payments between the ages of 62 and 65, her benefit amount may be reduced.

Benefits of family members are related to the worker's benefit. The monthly payment to the wife or dependent husband or child is equal to half the amount paid to the retired worker (except in the case of the actuarially reduced benefits for wives claiming payment before age 65). There is, of course, a maximum amount that can be paid on any one account. Beginning January 1959, the maximum family payment has been between $53 and $254 a month.

Monthly benefits for workers who retired recently are averaging approximately $76 for a retired worker with no eligible dependents and $127 for a retired couple. The average for a widow with two children is $181.

A lump-sum death payment ranging from $99 to $255 is payable in all death cases where the deceased was insured.

SUSPENSION OR TERMINATION OF PAYMENTS

The basic purpose of social insurance is to replace part of the earnings lost because of retirement, disability, or death. In keeping with this concept, payments may be suspended or terminated under certain circumstances.

When a beneficiary—either a retired worker, dependent or survivor—is under age 72, benefits are not payable for one or more months if he earns more than $1200 in a year. If a retired worker's benefit is not payable, benefits are not payable to his dependents. If a dependent or a survivor exceeds the allowable annual earnings, only that beneficiary's payment is withheld. The same earnings test applies to employed and self-employed people. Regardless of a beneficiary's annual earnings, benefits are payable for any month in which he neither earns more

than $100 in wages nor renders substantial services in self-employment. Income from insurance, investments, rentals, and other retirement payments does not affect receipt of benefit payments.

The marriage of any person receiving monthly benefits as a dependent or as a survivor will normally end his or her rights to benefits.

Payments to a wife or dependent husband are ended if a divorce is granted.

A wife or widow under 62 or the divorced wife of a deceased insured person may receive payments only while she has in her care a child who is also entitled to monthly payments.

When a child entitled to benefits reaches age 18, his payments are stopped unless he is disabled. When the child of a deceased insured person is adopted, his payments end unless the adopting person is the child's step-parent, grandparents, aunt or uncle.

FINANCIAL CONDITION OF THE TRUST FUNDS

The Social Security Trust Funds are in actuarial balance according to current cost estimates. This concept of actuarial balance means that the income resulting from the contribution schedule now in the law and from interest earned on trust fund investments will be sufficient to cover payments for benefits and administrative expenses into the long-range future.

When the Social Security program was first established, it was widely recognized that the number of people receiving Social Security benefits and the total amount of payments would increase steadily for the next 50 or 75 years. This is not only because of the increasing number of older people in the country, but also because of the larger number of workers who will have worked long enough under the program to get benefits.

To meet this expected future rise in benefit payments, Congress has provided a schedule of gradually rising contribution rates. The combined employer-employee contribution rate to finance the retirement, survivor and disability benefits under the program is now 5 per cent of the first $4800 of an employee's annual earnings. The rate for self-employed people is 3-3/4 per cent. These rates are scheduled to increase again in 1960, and every 3 years thereafter, until they reach 4-1/2 per cent for employers and employees and 6-3/4 per cent for self-employed people in 1969.

Trust fund income exceeded outgo in every year during the period of 1937-56. During the calendar year 1957, trust fund income totalled $7.4 billion and outgo $7.5 billion. As a result, the assets of the fund declined by about $100 million, and on June 30, 1957, stood at $23.0 billion. On June 30, 1958, the fund amounted to $22.8 billion.

With the tax rate increase which took place on January 1, 1959, and those scheduled hereafter, the relation of income to outgo will change substantially. The assets of the fund may decrease somewhat in 1959. From 1960 on for several decades the trust fund will steadily grow larger.

SERVICE TO THE PUBLIC

The Social Security Administration has 584 district offices which are an integral part of communities across the nation. In addition there are more than 3000 other communities which are visited at least weekly to help individuals file their Social Security claims.

A basic principle in the administration of the program is that everyone must be dealt with as a contributor, or a member of a contributor's family. If he meets the conditions set forth in the law, he is entitled to his benefits as a matter of right and is entitled as well to helpful, friendly, and sympathetic treatment. Persons filing claims are informed of their rights and responsibilities under the Social Security Act and are given help as needed in securing the factual information necessary to determine eligibility for benefits. District offices refer to available community resources persons who ask for help on problems which are not directly connected with Social Security. District office staff members also cooperate in planning for the development of community resources for the aging, and generally become active members of the communities where they live and work.

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The cost of administering the Social Security Program is charged to the trust fund even though Congress authorizes it in the same manner in which it appropriates funds from the general treasury. The total administrative charges against the trust fund for the fiscal year ending June 30, 1958, was 2.3% of the contribution income and 2.1% of the benefit payments.

You know that the Social Security Program touches the lives of nearly all Americans and it touches them at a time when they are old, or sick, or bereaved. A program that serves people at such times requires men and women who are embued with its philosophy and objectives, dedicated to the

public service and who strive to excel in its administration.

Philosophies and Practices

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I want to congratulate Mr. Dewberry on his very able presentation of the technicalities and the legal points of Social Security. I am not a legal authority. I have been dubbed in my medical circles as sort of a philosopher, and even when I was Chairman of the Blue Cross nationally, I paid no particular attention to the technical application of insurance. I was not fit to. However, I well guarded, I believe, the basic philosophies of voluntary health insurance. I think I recognized the goal which we would want to achieve, and I drove as hard as I could along the road of progress to do this very thing. I had the pleasure of seeing Blue Shield grow from less than two million beneficiaries and subscribers in the entire United States in March of '46. The day that I told the boys I was tired and they should get themselves another president, there were 34,354,000 beneficiaries and today there are 42,000,000.

Social Security, in my opinion, is only one facet of the changes occurring in our philosophies and practices of government, and I believe that any abstract discussion of Social Security would leave much to be desired in information. I will, therefore, direct my attention to a brief consideration of the main changes in our philosophy of government that in my opinion are retrogressive, reactionary—not liberal—and threaten our freedoms and human dignity.

First I would ask your indulgence so I might read a short article that has been recently published by The Foundation for Economic Education. Its title is "Changing What We Are". From my viewpoint I think that this is an important dissertation.

"CHANGING WHAT WE ARE"

"Why are so many people shocked when they hear the freedom philosophy spelled out? Is it because most people cannot see the logic and justice of willing as distingished from unwilling exchange? Or because they disagree with the idea that each individual is entitled to the fruits of his own labor? Or, to use Tolstoy's distinction, because they prefer the law of violence to the law of love? Or because they dissent from the Golden Rule in economic affairs? Or because they think that organized police force can do more than defend, protect, inhibit and penalize?

"When the matter is put in the above terms, there is rarely any exception taken to the freedom position. It is reasonable. It is logical. It is just. It qualifies for the realm of the ought-to-be. And, why not? This is precisely what we understand as genuine Americanism.

"But people are shocked when the argument proceeds from the general to the particular, from general principles to particular day-to-day practices, from philosophical idealism to disturbances of the mores." (Mores is having the sanction of present usage.) "Any proposal of change, regardless of the reasonableness or logic or justice of the proposal, will shock most people when it threatens to disturb whatever rut they happen to be in.

"To illustrate: Question the propriety of government education, the characteristics of which are compulsory attendance, government dictated curricula, and the forcible collection of the wherewithal to pay the bills. You will literally stun your listeners, for the position runs counter to accepted practices, to our mores.

"Now, for an experiment, take the principles which are presently supported in education and extend them to a related field. Advocate that there be compulsory attendance at churches, sermons according to state prescription, and all citizens taxed to pay the church bills. Again, you will literally stun your listeners, for your position runs counter to accepted practices, to our mores.

"Such persons, twice stunned, cannot successfully argue that the Ten Commandments, the Golden Rule, and moral behavior are less important than the government school's 'life-sharing' periods, 'evaluation', lessons in democracy, or even reading, writing and arithmetic. Yet, they are shocked at the idea of no compulsion where we are using compulsion and equally shocked at the idea of compulsion where we are not using compulsion. Their inconsistency in reasoning does not bother them at all. They have adjusted themselves to the WHAT IS, and it is the disturbance of these adjustments that causes the shock and accounts for their persistence in conserving the WHAT IS.

"Animals adjust themselves to zoos. Many Negroes adjusted themselves to slavery. Millions of Americans, today, have adjusted themselves to paying farmers hundreds of millions of dollars annually for not farming; to bearing a heavily graduated income tax; to taking by force the fruits of Peter's labor to pay for Paul's housing, power and light, education, lunches, libraries, alcoholic rehabilitation,

unemployment, mail delivery, and whatever. If these be not adjustments to communism, then the ten points of the Communist Manifesto are not communism.

"Lord Byron in "The Prisoner of Chillon" has François Bonnivard conclude:

> My very chains and I grew friends,
> So much a long communion tends
> To make us what we are:—even I
> Regain'd my freedom with a sigh.

"Long communion with communism—with the State as the dispenser, rather than the Creator as the endower, of men's rights—tends to make us what we are. And 'long' need be no more than a few years. All the socialism, communism—call it what you will—which we embrace is now built in and is as much a part of what we are as our name, American."

I think that is a profound dissertation, and I shall base my remarks upon this, and I hope you will bear with me because as I said an abstract discussion of social security is not the answer to our intelligent conclusions. Throughout the recorded history of man we find that most every epochal act of man has been motivated by a burning desire for procurement of increasing freedom of action and expression. The modus operandi to achieve these goals has been the progressive reduction of central control over the lives and behavior of the individual. In every civilization where the greatest progress in the reduction of central control has been made, these civilizations flourished and produced the greatest individual freedom and the advancement of knowledge and happiness.

To quote the historian, sincere democrat and a great former President of the United States, Woodrow Wilson (and I take Woodrow Wilson as a competent authority as a Professor of History at Princeton) "Wherever in human history the people depended upon the State for their welfare, freedom disappeared."

I believe the basic philosophy of the United States as implemented by The Constitution and The Bill of Rights, establishing a Federation of States, each with sovereignty and rights, and limiting the Federal authority to do only that which the respective states and individuals found they were unable to do, has accomplished the greatest progress to the attainment of freedom and dignity ever known.

I believe it may be stated with certainty these implemented basic philosophies of government have produced the finest civilization ever enjoyed by humankind. Nowhere in recorded history has the production and blessings of knowledge been comparably achieved. Nowhere in history has the God-given resources of more than 3,000,000 square miles of unexplored wilderness been so rapidly developed to the usefulness of man. Nowhere in human history has the fine attributes of man been developed, such as tolerance, kindness, charity, civic interest, love of thy neighbor and administration of justice. Nothing in this world is free. The above statement of our accomplishments which I believe can be documented have been paid for and the payment until very recently has always been voluntarily met by our people. What is the pay? The price of freedom resolves itself into two categories as I understand them. The acceptance of laws, regulations, and self discipline to govern the individual's actions and relationship to the community for the protection of the community, and secondly, the assumption of responsibility by the individual for his personal welfare. However, the basic principle of these laws may be tersely stated as Justice for All and Discrimination Against None.

This brings me back to consideration of the mores of the present in our great community of America. I believe the fundamental philosophies as to the position and power of the Federal Government are being progressively enlarged, to the immediate danger of individual state sovereignty, individual freedom and the economic welfare of our people.

Increasing regulations and intrusions into the business life of our community have made for the development of Bureaucratic control with all of its inefficiencies, oppressive taxation and inevitable obstruction to progress. Our government and its administrators and legislators give lip service to the philosophy of free enterprise. Yet we experience an ever increasing clamor for further development of Government production of such things as electric power as illustrated in the TVA. This TVA was established with the definite assumption that its purposes were two—flood control and aids to navigation and, of course, the development of electric power would be incidental because in order to accomplish flood control and improve navigation in the Tennessee River they had to build dams, but it was purely an incidental production. However, the insatiable appetite for governmental power over the lives and economics of the people of a given community once established is certainly proven by TVA. Today we have consented through recent legislative action of our Congress the permission for TVA to

issue its own bonds and for the planned building of nine additional steam plants. What happens to free enterprise if we continue to permit government to unfairly, through the power of taxation, continue such practices.

Through TVA it was claimed the standard of living of the people in the area would be benefited and elevated. However, critical analysis of conditions in the area of the TVA proves that the average income of those people living in the area is less by far than those living in the immediate surrounding area not serviced by TVA. The resulting economic damage to other community industrial activities have suffered severe dislocations. That is to say, it is axiomatically true that the control of power in our modern industrial civilization is a control over the lives of all the people in the community.

State sovereignty is a philosophy of government that affords one of the greatest protections for the preservation of our freedom and orderly progress and adaptation to changing conditions. If we are not adamant in the preservation of State's Sovereignty I feel certain it will be destroyed by the ever increasing Federal Government power.

To illustrate just one thing, the Supreme Court's decision on segregation has produced chaos, confusion, unhappiness, hatred and violence. I take no stand myself upon this issue except to say that revolutionary, abrupt edicts by centralized authority can only result in the above conditions that prevail in your part of the United States today. The mores of a given community can only be satisfactorily and peacefully changed by evolution.

I am reminded of a statement made by former Attorney General Rogers in arguing this issue of segregation before the Supreme Court of the United States. He was horrified to believe, as some people thought, that the United States Government would ever enforce the desegregation law by the use of Federal Troops. How long did it take, gentlemen, for government power to send Federal troops into Little Rock? The basic philosophy of our laws is Justice for All and Discrimination Against None. In recent years, political expediency has caused a great change and a major reversal of that philosophy to favor the individual, or certain selected groups of the community, at the expense of the community.

I cite to you the Agricultural Act. The Agricultural Act, enacted during the great depression, an act which I believe thoroughly was one of legislative hysteria and the brain child of a very astute, adroit politician, the President at that time. The Agricultural Act, I have no doubt whatever, was a child of political expediency. I want to say that there is no one who has greater respect for the farmer than I. No one appreciates the importance of agriculture to the community more than I. I realize that agriculture determines the survival of the community and the character of its civilization. However, when 6,000,000 farmers representing 20,000,000 people engage in a rather homogeneous occupation and a similar production (I realize agriculture grows different things but they can be classified as a similar production) and cannot survive satisfactorily in an atmosphere of freedom without an expense to the community which at the present time is $6,000,000,-000 annually of subsidy, derived by taxation from the community, then we must admit that humankind is not equal to accept and practice the freedom that has been the mores of this country heretofore. It is interesting to observe that many farmers, especially the small ones, have now found what they originally thought was free has proved to be prohibitive. The small farmer, as you well know, has profited very little in dollars and has suffered the loss of his freedom and property rights even to the point where in innumerable instances he has suffered tyranny in the administration of what he first presumed to be a benevolent act. The famous Yankus case, of which you all know, is only one of many where the farmers of this country, through the administration of the Agricultural Act, has been bankrupted by fines, confiscation of farm implements, etc. This is central government bureaucratic administration at its best. It is axiomatically true that the agency or persons that control production of goods actually control the life of the people in that community, and agriculture is important production.

I would like to cite one other thing that I think is highly immoral and before I do, I would like to state my position. I am a veteran of World War I. I made every effort to participate actively in the military forces of World War II but the Procurement Assignment Commission of the State of Ohio said I could not go. I was forced to stay home and run the Civilian Defense of the Bi-State, Tri-County area around Cincinnati from a medical standpoint. Secondly, not only am I a veteran who wanted to serve my country, but I lost my one and only son, a brilliant young doctor, as a casualty in World War II. So whatever I say comes from the heart and comes from a sincere desire to do justice to anybody who has suffered materially in defending this great United States.

The Veterans Administration is, in my opinion, the best example of boondoggling in favor of a selected few at the expense of the community. Here we have the astronomical figure of $5,000,000,000 expended annually, from taxation of course, and I wish to call this one fact to your attention—that of this $5,000,000,000 overall expenditure $900,-000,000 has been expended purely for medical services rendered to the veterans. That may sound all right if it justified, but is it? It is shocking to me when I learn from documented figures that now. and for several years past, approximately 85% of those veterans treated in general hospitals (and I am excluding, if you please, Tuberculosis and Psychiatric Institutions) had non-service connected disabilities. This to me is a very high price to pay for votes and as a reward for patriotism. If we must buy loyalty and a willingness on the part of our citizens to defend America, which has afforded equal opportunity, freedom and dignity to the individual, then our citizenship and civilization has reached a very low state.

The American people, because of the freedom we enjoy, have always been interested in the welfare of other peoples in this world. In times of catastrophe we have always been prompt and liberal in the alleviation of suffering anywhere in the world. Motivated by this spirit of sympathy and charity, it was only natural we would desire to assist in the rehabilitation of those countries which suffered so greatly in World War II. It is now fourteen years since the close of World War II and to date America has, through taxation of its people, contributed over the world $70,000,000,000 in aid of various kinds. It is now, I believe, high time we take a good look at what we have accomplished. Have we made loyal friends? I personally have not seen a report that justifies the conclusion that we have. We have experienced some blackmail by the recipients and also criticism from the beneficiaries of our generosity. Have we spent our money wisely and efficiently? Many documented reports indicate many projects were useless to the beneficiaries. Little of the total ever reached the needy people of the communities, and our representatives, state department and other departments, have failed considerably in developing good relations because of their attitude toward the community which they were serving and also toward the individual citizen of that community.

What impact has all this had upon the welfare of our American citizen? Our exports have been discriminated against in countries we have assisted. Because of our largesse, foreign industry has been modernized beyond anything they ever hoped for. Efficient production has been achieved in these countries with our money and at a very low labor cost. Our trade agreements have not protected the American producer, neither management nor labor. The great American dollar, and this to me is extremely important, has depreciated in foreign markets to a point where its solvency is, in some parts of the world, suspect. Our gold reserves have been greatly and seriously reduced. American exports are decreasing at a frightening rate and imports increasing rapidly. The textile industry has suffered materially as you know, maybe not so greatly in Virginia but I am sure your neighboring states of North Carolina and others, where textile industries are an important economic influence in the community, have suffered. All fabricated metals have been markedly involved and this makes for an increase in unemployment. I believe it is about time the great father at Washington begins thinking about the welfare of his own children instead of continuing to increase the taxation of his children, inflating the cost of every necessity of life.

No doubt, as patriotic citizens, you purchased war bonds to the hilt. I would do it again, even under the present circumstances, I want you to know. You found at maturity or later, if you kept them as the government expected you to do, that these "E" bonds definitely lost money. How? First the increment was subject to income taxes. Second, after paying this income tax you found that instead of the 100 cent dollar that you invested in 1940, '41 or thereabout, you had a 48 cent dollar. You invested $750 in a $1000 "E" bond but the money that you finally kept from the transaction when you sold them approximates now about $600 of purchasing power.

I have mentioned only some of the important changes in our mores. There are many other facets of our grave changing policies that could well be discussed but time does not permit. If what I have said to you gives you pause for thought I have been well repaid. I have said nothing up to the present on the specific subject under discussion, Social Security, and it was my desire to give you some information as to the policies practiced and the behavior of the agency handling Social Security.

If you were to purchase insurance, I am sure you would first investigate the financial stability of the company soliciting you, also their record and reputation as to the payment of contracted benefits. You would look for fine print indicating many of the

exclusions that were enumerated this morning or exemptions from payment of your estimated claims. I believe you should do the same in reference to Social Security.

Always keep in mind the few documented items I spoke of in reference to discrimination as practiced today, tyranny as practiced in the Agricultural Act, inefficiencies of government and bureaucratic management and, last but not least, the political influences that bear upon such a program.

Social Security is really a misnomer. By declaration of the Attorney General before the Supreme Court of the United States, I think in 1936 or 1937, "Social Security is not insurance, it is a gratuity from the Government." Those are actual quotations from his argument. I would like to ask you since when can the United States Government hand out gratuities? The United States Government has nothing financially. It is sustained and maintained only by the taxes it imposes on the people of the United States. Webster's dictionary defines gratuities as gifts and bribes. It cannot be accepted as insurance because there is no contract. It is purely a presumptive obligation at the whim and desire of our legislative bodies as to what you will do. Your future treatment by Social Security is in the day-to-day pleasures of the Congress of the United States. It can, at any time, completely abrogate Social Security. It can enhance, out of taxes, the benefits. It can raise both the percentage of the wage base, and the wage base at any time it desires. Your distinguished forefather of this State, and no greater democrat or greater liberal ever existed than Thomas Jefferson, said "Trust no man without a definite contract."

Social Security puts arbitrary limits on your earned income until you are 72 years of age. If you have an income of $50,000 or more from investments and you have paid your premiums up to the time of absolute retirement, they will pay. I say this is discrimination and there isn't much "social" about it. The poor guy that needs more than $100 a month to live and wants to work and who has paid premiums for 25-30 years, gets nothing, but the millionaire who has been an executive on salary and paid his premiums, *must* take it.

I have in mind an example of this discrimination in my own community. A young man of 54 dropped dead. He had a wife and a child eight years of age. He lived in a $22,000 home on which there was an $8000 mortgage. He had embarked on a very small business which had a $14,000 value and he owed $6000 on that business. He owned $25,000 of common stock securities and had $10,000 war risk insurance from World War I. His wife was a well, hearty, middle aged woman. She could use this money very well. Yet, if at that time she made more than $50.00 a month her Social Security was abrogated, definitely.

I had a friend, and I did have one or two friends who were millionaires, believe it or not, who liquidated his business and retired and the first thing he knew he got a check from Social Security. He was a very philanthropic and civic minded individual. He went to the Social Security Department in his lack of information. He said "I don't want this money, give it to somebody who needs it." "No, Mr. Weston, you must take this money or it lies here inanimate from now in perpetuity." He had to take it. I think that's discrimination.

Social Security is following the same course as Income Tax. The father of your great Senator Byrd (and I laughed about the quarter of one per cent when income tax laws first became effective) prophesied exactly what had happened, how it would become an actual confiscation of your property and an oppressive taxation, but no one listened to him. I am shooting up the same tree today. Social Security in my opinion is following the same course as income tax, progressively increasing the percentage of tax on progressively increasing wage base. In my opinion it is conceivable that within twenty years of this date this tax will be so greatly increased, that between Income Tax and Social Security, the financial oppression will have completely bankrupted all the people in the United States. I am sincere in that belief even though you may think I am not correct. Unless this course is radically changed, government will be the only institution possessing any wealth and complete statism is inevitable under such conditions. History proves it. I sincerely believe it would be extremely unwise to place our Social Security in the possession of an agency that has proven by increasing national debt its inability to efficiently conduct its own financial and fiscal affairs. I am speaking now of the United States Government. We have had an increasing public debt that is so burdensome with no end to it, deficit spending and what not. I think that when it transacts its usual, normal, accepted businesses and makes such a failure of it, I for one am not willing to put my security in their hands.

Social Security, at the present time, has a plus $300,000,000,000 worth of obligations. If there was not one more person put on social security from this

day on, the future obligations for payment would be over three hundred billion and, as stated, this bookkeeping manipulation of a so-called trust fund which is around $22 to $23 billions of dollars is the only reserve—and what is it? It is government bonds that you and I are going to pay out eventually and pay the interest charges upon.

Your great Senator Byrd recently, within the past eighteen months I believe, said we publicize in America that the Federal debt is $276,000,000,000. (Now it is $289.) He said that is not our Federal debt, and I think he knows finance, I think he knows legislation. As a matter of fact, I think he knows so much that I wish you people here would put him up as President, and I as a friend of Bob Taft and a Republican by choice, would vote for him tomorrow morning. But he says our debt is $600,000,000,000. Senator Byrd has proven with out any doubt that the United States Government today is indebted with its routine debts and its Social Security obligations—and that means you and me, we are the government of the United States—$600 billion plus dollars. That is equal to more than the entire material wealth of this country. If the United States Government was to liquidate its debts today, neither you nor I would have one piece of property of any kind. The United States Government from a bookkeeping standpoint, not from a production standpoint, not from a capability standpoint, but from a dry mathematical standpoint is bankrupt and don't kid yourself.

There are many, many people, because of the fine print excepting exclusions in this and that regulation, not getting Social Security that expected to. Here is an article not by a doctor or any person who is connected with it—Sylvia Porter. Her article of July 8 goes on to say how many hundreds of thousands of people who expected Social Security, at the present time, are not getting it.

Now, personally, I want to read just one short, rather abstract statement and then I'm through.

"The reasons for seeking Social Security inclusion are rather compelling on the surface. One might almost be tempted to say what more do you want. In truth, though, there is more. The reasons for rejecting of Social Security on any terms are even more compelling than those for acceptance. Some reasons apply to everyone, others are most important to you doctors." Social Security as I stated is not insurance. The Government is well aware, and in this I would have to repeat exactly what the Attorney General said in the United States Supreme Court and I'll admit it. "A person may pay Social Security taxes for 35 or 40 years without building up any vested interest in the benefits." And again, "The Act does not create any contractual obligation with respect to the payment of benefits." "A person covered by Social Security does not build up an estate when he pays his taxes. Only specified dependents may receive benefits on the death or retirement of the taxpayer. Benefits may be reduced or withdrawn at the whim of Congress. The right to alter, amend or repeal any provision of this Act is hereby reserved to the politicians. A private contract for life or disability insurance, or for an annuity is definite as to cost, contractual as to benefits, and certain in the event of death, disability, or attainment of age agreed upon in advance. Social Security fails to provide a contract, benefits are uncertain, variable, and capricious; and the cost, instead of being a known, level premium during the life of the contract, rises frequently, as often as every two years."

If you had a selfish interest in this you'd have reason to believe you shouldn't join it. Only 4% of our doctors are retired at 65. You would work until 72 unless you dropped dead with a coronary and if you did, and were working at 65, you'd get no benefits. In the meantime you would have lost over $10,000 of the benefits you could have had if they didn't have these restrictions.

Now I want to say just one more word. Personally, I have come to believe the greatest threat to my security is the present policies and practices of our National Government. We owe it to ourselves to become intensely interested in our great Government and not go down the road to serfdom.

The AMA put out a big questionnaire a year or more ago and there were over 1600 replies. The important question was "Should we—the AMA—take more interest in the political economy of our country than we have?" Believe it or not, I read these 1600 replies and the heterogeneous opinions were a reflection of what?—No knowledge of political economy. Our future, our practices, our lives, our security are bound up in the political economic future of this country and how it is practiced and we should be interested in the political economy that surrounds us.

The great Lord Acton, no greater political philosopher ever lived, says that power tends to corrupt and absolute power corrupts absolutely. That's what happened in every civilization where central power governed the people's lives.

I have one more quotation and I'm through.

"What has always made the State a hell on earth has been precisely that man has tried to make it his heaven."

Question and Answer Session on Social Security

Immediately following the excellent papers presented by Dr. Schriver and Mr. Dewberry, the Moderator, Dr. W. Linwood Ball, called for questions from the audience.

Dr. Schriver was asked to comment on the often heard assertion that nearly everyone except the doctor is included under Social Security. He stated that, although physicians as citizens should accept certain obligations, there is no reason why they should not oppose any political philosophy to which they object.

Panel members were then asked to comment on the experience of other countries which have had Social Security systems longer than the United States. Mr. Dewberry was firmly convinced that the American system is far better than any other. He stated that the American system is definitely wage-related and the amount of benefits thus vary instead of falling in graduated grooves.

It was Dr. Schriver's feeling that Bismarck's socialism of Germany was largely responsible for the decline of the medical profession in that country. He attributed the success of the medical profession in this country to its freedom of action and thought.

A question was raised concerning just what commercial insurance companies could offer in place of Social Security and there were a number of comments. It was brought out that at least one company, and others will probably follow, has introduced a voluntary contractual individual retirement plan which is tied in with fluctuations of the economy. Dr. Schriver pointed out it should never be forgotten that commercial insurance companies must operate under sound fiscal policies and must be governed by fixed and proven laws of safety.

Mr. Dewberry then pointed out that the insurance industry had changed its thinking concerning Social Security and actually keeps its clients informed concerning coverage, etc. He agreed, however, that Social Security is not insurance per se. In commenting upon the future of the program, he went on to say that the promise of the government is behind the program just as it is behind every dollar we spend, and there is little likelihood that the benefits will ever be lowered.

The panel was then asked how the medical profession can actively oppose the Forand Bill and at the same time ask for Social Security. Dr. Schriver firmly believed the profession would be contradicting itself if it took such a stand.

Dr. Archer was recognized and informed the panel that he had appeared before the House Ways and Means Committee during the July hearing on the Forand Bill. At that time, Mr. Forand asked one of the witnesses just how the medical profession could reconcile the attitude of those physicians who want Social Security but who do not want the Forand Bill. According to Dr. Archer, this question undoubtedly was given careful thought by members of the House Ways and Means Committee.

The panel was then requested to comment on the Keogh-Simpson Bill, which would permit the self-employed to invest a certain percent of their income for retirement purposes. The sum invested would be treated as tax exempt. It was Dr. Schriver's opinion that this Bill is a good example of the way in which the self-employed group has been discriminated against. He pointed out that the biggest objection on the part of the administration had been that the Bill would deprive the government of some $360,000,000 income. This argument was deplored in view of the "give-away" program presently carried on by the government.

There followed a discussion concerning the present Social Security tax rate and Mr. Dewberry was asked whether or not there was any guarantee that the rates and benefits would not be altered. Mr. Dewberry pointed out that the present schedule calls for the rate to be increased again in 1960 and every three years thereafter until the maximum is reached in 1969. In 1969 both employee and employer will be paying 4½ per cent.

The next question had to do with whether a physician could conscientiously support the Keogh-Simpson Bill and at the same time be in favor of Social Security. Dr. Schriver, with certain reservations, felt that this might be possible. He stated that if it is accepted other people in their economic life can have exemptions and create a security for their future through pensions and savings, it would seem morally right that physicians should be able to do the same thing as free citizens in a free country. In conclusion, he pointed out that because of the good job American medicine has done and the proven need for physicians' services, the fact remains that the average physician can count on being successful as long as he retains his freedom. Under such conditions, a physician should have no reason to worry one bit about Social Security.

Mental Health....

WILLIAM M. LORDI, M.D.

Infantile Autism

"Infantile Autism" was described for the first time approximately 20 years ago by Dr. Leo Kanner. In the older literature there appear references in Bleuler's and Kraepelin's work to "dementia precocissima", which was thought to be primarily a progressive, degenerative disease of the brain in young children. This was later called Heller's Disease in some instances but it was recognized that precocious infantile dementia represented various organic conditions, and infantile autism was not separated out as a distinct entity till Leo Kanner's work.

Lauretta Bender added a great deal of knowledge to the field by her studies on autistic children which have been going on for the past 20 years, first at Bellevue and at the present time at the Creedmore State Hospital in New York. Infantile autism is characterized first by the apparent incapacity, relative or absolute, on the part of the child to develop a meaningful relationship with people or objects within the child's environment, stereotyped manneristic regressed behavior, arrested or fragmented ego function. In the past more often these children were diagnosed as retarded, brain damaged, imbeciles, etc.

Dr. Kanner describes this condition as developing in the first two years of life. This disorder is classified as a psychosis because it involves total personality in its adjustmental adaptation to the world. In addition to unrelatedness on the part of these children, they further therefore appear not to benefit too much from their experiences.

Many of these children develop speech only to lose speech and become mute or make non-meaningful sounds and noises. Lauretta Bender's feelings are, along with Leo Kanner, that the autistic child who retains speech, or who regains speech prior to the age of five or six, has the best prognosis for going on to adapt to the environment. Most intelligence tests will test these children out at a defective or below average level, because their unrelatedness makes it difficult for them to learn many of the simple tasks inherent in performance tests.

A great deal of study has gone into the backgrounds, the parents, the social conditions surrounding the development of this somewhat enigmatic syndrome. The parents have been described alternately as "Refrigerator Parents" by Dr. Leo Kanner, who has subsequently changed his formulation to recognize there probably is central nervous system dysfunction, which in turn makes these children more liable to the life experiences. The latter, Dr. Kanner feels, brings about this complex phenomenon, one aspect of which is the psychological distance and unrelatedness that is so manifest and the earmark of this syndrome. Lauretta Bender talks at some length about infantile autism as being a dysmaturation process and that the central nervous system shares in this overall dysmaturation. Therefore, the psychological phenomena and behavioral phenomena are but extensions of altered central nervous system dysfunction.

Many researchers find that these children have a significantly less incidence of central nervous system disease, damage, or altered metabolism, and therefore this may represent primarily an atypical adaptation as a result of the earliest life experiences and very early frustration of the nurturance needs, emotional distance on the part of the parents, to which the child reacts by withdrawing to varying extents, giving different shades and gradations of autism.

Several 20 year studies and observations on the autistic child have revealed that when the autistic child reaches late childhood and adolescence, he is indistinguishable from the schizophrenic except that having been psychotic from the very early time in life, during the time most children have learning and achievement experiences, these children develop defects as a result of not being able to take advantage of such experiences, due to defects in human relationships.

At the present time there are several autistic children being intensively studied and under treatment at the Memorial Foundation Home in Richmond, Virginia, also on an out-patient basis at the Memorial Guidance Clinic some autistic children are carried in individual psychotherapy with their par-

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

ents. These children are studied not only psychologically, but in terms of electro-encephalograms and neurologicals. Further studies are proposed by this center to clarify the role of the central nervous system function, alterations in metabolism and blood chemistry. The study also includes close work with the parents in psychotherapy in an effort to explore the nature of the parent-child relationship, the personality constellation of the parents, that leads to or participates in development of autism in the child.

It has not been established to the satisfaction of many that the condition known as infantile autism is related to parental, natal, or postnatal factors. However, many child psychiatrists feel that we are dealing with one of the earliest and more profound emotional disorders of childhood and early recognition and treatment offer the best hope for remission. The onset of autism is in retrospect usually fairly sudden following illness, hospitalization, death of parents or birth of a new child, etc., and the hope is to recognize and procure psychiatric assistance as soon as the changes in personality and behavior are suspected or found.

Pediatricians and generalists who may be the first to examine and so diagnose these children have an important role in instigating early treatment. Change from the emotional climate of the home and a nursery school whose program is planned for these children are the beginnings of therapy. A guidance clinic or child psychiatrist should be consulted for special therapy if residence treatment is not at once available. Speech which is lost until after the age of six has less hope of recovery, whereas many preschool autistic children learn to talk again with therapy, and so establish a channel for relatedness that colors the entire prognosis.

Smoking and Cholesterol Level

Smoking appears to have no effect on blood cholesterol levels, according to a study conducted by Dr. Irvine H. Page, Cleveland heart specialist, and two associates.

If smoking does play a role in causing heart attacks, it is not through any effect on cholesterol, the fat-like substance in the blood that has been implicated as a cause of heart attacks, they concluded on the basis of their study.

Writing in the November 14th Journal of the American Medical Association, Dr. Page said it has been suggested that cigarette smoking is in some way related to heart attacks and hardening of the arteries, but this is difficult to prove.

Many investigators believe the evidence is good for an association between high cholesterol levels and hardening of the arteries. So if it could be shown that cigarette smoking is followed by a rise in cholesterol levels, this could be interpreted as evidence for a relationship between smoking and hardening of the arteries.

However, the new study failed to show any rise in cholesterol levels after smoking.

Twenty laboratory personnel, including 15 regular smokers and five nonsmokers, participated in the study. They smoked two nonfiltered cigarettes within a 10-minute period, inhaling deeply. Blood cholesterol levels were measured before they smoked and at 10- and 30-minute intervals afterwards.

The levels remained "essentially unchanged" in most subjects. There seemed to be no greater variations in the habitual smokers than in the nonsmokers.

The lack of effect of smoking on the cholesterol levels in the nonsmoking persons was striking. They had smoked two cigarettes with inhaling, and this could be considered to be "a not inconsiderable stress." At the end of the smoking they felt dizzy and chilly, but showed no cholesterol level change.

The study showed the relative stability of serum cholesterol levels, at least for short periods. The slight stress of blood drawing or smoking was not sufficient to modify them. The long-time effect of smoking on serum cholesterol is not known, but it is possible that varying cholesterol concentrations may result from changes in eating habits caused by smoking.

Dr. Page's associates are Lena A. Lewis, Ph.D., and Mohammed Moinuddin, Ph.D., of the Cleveland Clinic Foundation.

Pre-Paid Medical Care. . . .

Edited by
RICHARD J. ACKART, M.D.

Many Questions

According to plans now approved and being implemented by the communities served by Virginia Hospital Service Association, this Blue Cross Plan (Richmond headquarters) during 1963 will find itself providing coverage for the use of 6,596 general hospital beds. Last year the utilization of the Plan's prepayment program was based on the availability of 5,661 general hospital beds. The planned increase in number of general hospital beds is 935, or 16.5%.

More than 18 million dollars will have to be raised to provide this expansion of general hospital beds. The money will come from both public and private sources. The potential givers should be asking some questions: Is the 16.5% increase in beds justifiable in terms of population growth or other basic factors? For what specific uses will the additional beds be needed? Is it safe to assume that present trends of utilization of hospitals will continue unchanged? How may those trends be altered by advances in medicine and by the changing age distribution of population? Are the broad trends of medicine leading towards more or less use of beds for acute illness? What may conquests of particular diseases bring to hospitals? (Antibiotics have nearly wiped out the otologist's operation for mastoiditis.) What may the coming therapy of cancer do to a much broader range of surgery? How will these and other advances affect the next few years? Will the expected increase in health insurance be in insurance plans of a kind that will diminish the utilization of bed care in hospitals? Are the hospitals cooperating in community planning instead of competing for individual expansion?

These questions are not answerable statistically. Nevertheless they are not academic questions. They call for flexibility in planning and for flexible minds among the planners.

Another set of questions involves types of bed care needed and also substitutes for bed care in institutions. Considering the probable changes in medical service and in the ages of the population, how many of the future beds should be in units designed for less intensive care than the typical hospital unit is today? How much would this question bear on buildings and equipment? How many might be in skilled nursing homes? Should not these nursing homes be directly associated with hospitals and be parts of hospital planning?

To what extent should we plan to utilize the facilities, personnel, and organization of hospitals to enlarge ambulatory services for diagnosis and treatment of people who are paying their way through insurance or otherwise? How shall we then be fair to physicians not on the hospital staff? How far should hospitals include rehabilitation units? How far should home care be developed under the medical and nursing supervision of the hospital?

In a word, the planning of services and the organization of services cannot be separated from the planning of facilities. We are very likely to overbuild unless we take all these elements into account, so far as we can.

There is dispute about the degree to which hospitalization insurance has contributed to more use of hospital beds than is medically necessary. Does the excessive use average 5 per cent, or 20 per cent? Or something between? There can, however, be no doubt that hospitalization insurance plans do provide incentive for some doctors, some patients, and some hospital administrations to use hospital beds more than if the insurance plans did not exist.

Whatever the percentage may be in Virginia or elsewhere, the practical question is, how can we modify the more prevalent types of insurance plans so as to lessen the incentive of doctors, patients, and administrators to use more hospital beds than are necessary medically, or to retain patients for longer stays than are requisite medically?

Obviously doctors, as consultants to their communities in matters of health care and medical economics, must be able to discuss these questions intelligently—even those which are today seemingly unanswerable. The medical profession of Virginia should have, or participate in the preparation of, a long-range plan of State-wide hospital expansion, a plan which takes into account quality of hospital service as well as number, distribution, and types of beds. A plan is most definitely needed, as is a plan-administrating body with enough authority to overcome opposition from some special interests. Because of their huge stake in the matter, doctors should take the initiative to prove that voluntary action, *if thoughtfully planned and cooperatively controlled,* can do the job of meeting the public's health care needs with true efficiency.

Public Health....

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

"Orange Review" Picnic Food Poisoning Outbreak

A picnic held on September 25, 1959, at Cedar Farm, near Orange, Virginia, for the members of the staff of the "Orange Review", was followed by an outbreak of gastro-enteritis. The Orange County Health Department became aware of this outbreak on September 26, 1959, and a preliminary investigation pointed to the diagnosis of food poisoning. Questionnaires were distributed to the 96 persons known to have eaten the food at the picnic and elsewhere. All questionnaires were completed and returned, a tribute to the zeal and persistence of the Health Department personnel.

Clinical Disease: The onset of the illness was explosive in nature, with abdominal pain, nausea, vomiting, diarrhea, and prostration. Blood was noted in eight stools. There was no fever. Recovery in most cases was within 12-48 hours. One boy developed severe asthma following the gastro-enteritis. There were no fatalities.

Epidemiological Data: There were no cases of gastro-enteritis reported from people who had not eaten the picnic foods. Seventy-two people became ill out of the total of 96, an attack rate of 75 per cent. The food was served from 5:15 to 6:30 P.M. In addition, food was sent to some individuals who did not attend the picnic. Ages ranged from one to 81. The incubation period had a range of 1¼ to 6½ hours, with a median of 2½ hours. Sixty persons were seen by doctors, 51 of whom were sent to three local hospitals, with seven admissions being made. There was no history of recent illness in either of the two food handlers who prepared the food. Attack rates for the food served are shown in Table I.

Table I
ORANGE REVIEW PICNIC FOOD POISONING OUTBREAK, SEPTEMBER 25, 1959
ATTACK RATES

	Ate				Did Not Eat			
	Total	Not Ill	Ill	Attack Rate %	Total	Not Ill	Ill	Attack Rate %
Barbecued Pork	77	9	68	88	19	15	4	21
Fried Chicken	90	23	67	74	6	1	5	83
Potato Salad	82	10	72	88	14	14		
Pickles	58	12	46	79	38	12	26	68
Potato Chips	72	21	51	70	24	3	21	88
Bread	67	11	56	84	29	13	16	55
Iced Tea	90	22	68	76	6	2	4	67
Barbecue with Potato Salad	74	6	68	92				
Barbecue without Potato Salad	3	3						
Total	77	9	68	88				
Potato Salad with Barbecue	74	6	68	92				
Potato Salad without Barbecue	8	2	6	75				
Total	82	8	74	90				
Neither Barbecue nor Potato Salad	11	11						
Chicken with Barbecue	72	9	63	88				
Chicken without Barbecue	18	14	4	22				
Total	90	23	67	74				
Chicken with Potato Salad	77	10	67	88				
Chicken without Potato Salad	13	13						
Total	90	23	67	74				
Only Barbecue and Chicken	3	3						
Only Barbecue and Potato Salad	5		5	100	9	9		
Only Chicken and Potato Salad	8	4	4	50				

Food Preparation: The menu consisted of barbecued pork, fried chicken, potato salad, pickles, potato chips, bread, and iced tea. The food was prepared by an unlicensed local caterer, with one helper, in the kitchen of his farm house, under poor sanitary conditions. The foods were prepared in the following way:

A. Barbecued pork. Two shoulders and two middlings of a pig, butchered eight days before and frozen, were picked up on the morning prior to the picnic at a local food bank. The meat was cut into large pieces, seasoned with salt, pepper, and onion and boiled for four hours in two enamel pans. The fat was then trimmed and the meat cut into smaller pieces and put in a large aluminum pot with some commercial barbecue sauce. This was allowed to simmer over night and all next day with occasional tasting and seasoning, and was taken to the picnic area about seven miles away, at 3:30 P.M. on the day of the picnic. It was placed in a large pan of boiling water over a wood fire on arrival at 4:00 P.M., and was served from the original container.

B. Chicken: Twenty-five chickens, already cut up, were delivered to the caterer on the day before the picnic. Twenty of these chickens were frozen. They were placed in the caterer's freezer, removed at 9:00 P.M. that night, and allowed to thaw at room temperature until floured and deep fried at 11:00 A.M. on the day of picnic. When cool, the pieces were placed in a box lined with "Reynolds Wrap" and covered with the same material. The chickens were not reheated before serving.

C. Potato salad. A bushel of potatoes was boiled at 9:00 A.M. on the morning of the picnic, and cut up and put in an enamel pan. Celery, onions, pimentos, mustard, sweet vinegar, and mayonnaise were added to the potatoes and thoroughly mixed. The mayonnaise was brought from a local wholesaler and was unopened and unrefrigerated until used. The salad was put into a large stone jar at 12:00 noon and was not refrigerated before serving. The temperature in the kitchen was in the region of 87°F.

The other foods were all commercially prepared. The tea was made with water from the well at the caterer's farm, and the ice was from an approved source.

At the picnic, the foods were placed on a table and served on paper plates. Plastic eating utensils were used. The picnic area was sprayed with two brands of insecticide, but the food was covered during this spraying. After the picnic, the caterer collected all the uneaten food and took it home, putting it in his refrigerator. The food samples were obtained from this source, except from one complete plate of food which was found in the "Orange Review" refrigerator.

Laboratory Data: Bacteriological examination of the barbecued pork, fried chicken, and potato salad showed that all three contained hemolytic, coagulase positive staphylococci. Numerous Gram-positive cocci were observed on direct smears from the potato salad. No organisms were seen in direct smears from the other two foods except for a few cocci in the barbecue from the complete plate.

Swabs from the nose and throat of the caterer were taken and the throat swab showed the presence of a hemolytic, coagulase-positive staphylococcus. The nose swab was negative. No lesions were visible on the caterer's skin. Swabs from the caterer's helper showed staphylococci of the hemolytic, coagulase-positive type to be present in the nose, throat, and a small cut on one hand. Stools from both the caterer and his helper were positive for staphylococci. They both ate some of the food during the preparation.

Samples of the mayonnaise and the barbecue sauce were negative for pathogenic organisms. The water sample at the caterer's farm was satisfactory.

Three of the fourteen stools submitted by patients were positive for staphylococci and staphylococci were also cultured from three patients' stools in a local hospital laboratory. No vomitus was available for culture. The staphylococci from the food handlers, foods and patients are being phage typed.

Discussion: The incubation period of this explosive outbreak coupled with the type of illness indicated that it was probably staphylococcal food poisoning. The method of preparation of the potato salad was ideal for bacterial proliferation, and it was the source of the toxin. This presumption was reinforced by the attack rates.

The comparison of the attack rates of those persons who did and did not eat potato salad are very suggestive. The only other likely food is the barbecue, but when attack rates for the potato salad and barbecue combined are calculated, it appears to be the potato salad which is the deciding agent. The same findings are evident when the chicken is combined with the salad and the barbecue. The bacteriological reports also indicate that the potato salad was the most heavily contaminated of the three foods. The finding of the bacteria in the fried chicken and barbecue may possibly be accounted for by contamination after the picnic. It is also possible, however,

that both foods were contaminated prior to the picnic, particularly the barbecue, as it was the caterer's habit to taste and season it as it simmered on the stove. Therefore, if the temperature of the simmering barbecue was in the range of incubation for the staphylococcus, it could conceivably have been contaminated at one of those times. A similar supposition may be made about the fried chicken, which according to one patient was not very well done. However, the attack rates for these foods are not as indicative of pre-picnic contamination as they are for the potato salad.

It is very probable that the source of the bacteria was from one or both of the food handlers. The most likely sequence of events is that the warm potatoes were contaminated during the cutting by the caterer's helper and that the thorough mixing of the potatoes with the mayonnaise in the salad produced a perfect medium for bacterial growth. This was aided by allowing the salad to stand at a temperature of 87°F. for some six hours before serving.

The prepared foods were eaten by both food handlers, but the one who ate the food at noon did not become ill. The other, however, ate at about 2:00 P.M. and had an attack of nausea and diarrhea about one and one quarter hours after eating. This was the caterer, and he nearly called the "Orange Review" to say that he could not serve the food because of illness. However, he recovered and took the food to the picnic. Presumably, the bacteria had not had time to produce the toxin by 12:00 noon.

Despite statements to the contrary, some of the suspected foods were kept in the caterer's refrigerator and not discarded. A farm hand helped himself to some barbecue, chicken, and potato salad on the Sunday morning after the picnic and developed profuse diarrhea in about six hours time. The caterer then fed the remainder of the food to some hogs. It is not recorded how they reacted.

Statistical manipulation of the questionnaire data confirms the conclusions that were stated above; namely, that illness struck hardest among those who ate the barbecue and the potato salad and that the potato salad was the real villain since not one person who ate no potato salad became ill.

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Monthly Report of Bureau of Communicable Disease Control

	Nov. 1959	Nov. 1958	Jan.-Nov. 1959	Jan.-Nov. 1958
Brucellosis	1	4	27	21
Diphtheria	1	7	11	31
Hepatitis	46	20	460	263
Measles	150	371	14720	21851
Meningococcal Infections	7	11	80	88
Meningitis (Other)	26	22	392	254
Poliomyelitis	22	23	282	148
Rabies (In Animals)	10	14	160	241
Rocky Mountain Spotted Fever	1	0	38	32
Streptococcal Infections	475	575	7924	6444
Tularemia	2	1	18	29
Typhoid	1	4	25	42

Current Currents

SPECIAL REPORT ON ACTIONS OF THE HOUSE OF DELEGATES OF THE AMA

The following summary covers only a few of the many important subjects dealt with by the House and is not intended as a detailed report on all actions taken.

FREEDOM OF CHOICE: The House reaffirmed the following two statements previously approved in Atlantic City:

1. "The American Medical Association believes that free choice of physician is the right of every individual and one which he should be free to exercise as he chooses."

2. "Each individual should be accorded the privilege to select and change his physician at will or to select his preferred system of medical care, and the American Medical Association vigorously supports the right of the individual to choose between these alternatives."

In order to clarify and strengthen its position on the issue of freedom of choice of physician, the following additional statement was also adopted:

3. "Lest there be any misinterpretation, we state unequivocally that the American Medical Association firmly subscribes to freedom of choice of physician and free competition among physicians as being prerequisites to optimal medical care. The benefits of any system which provides medical care must be judged on the degree to which it allows of, or abridges, such freedom of choice and such competition."

RELATIVE VALUE STUDIES: Reaffirming a previous policy statement, the House approved in principle the conducting of relative value studies by each state medical society. The House reiterated its authorization for the Committee on Medical Practices to inform each state medical association, through regional or other meetings, of the purpose, scope and objectives of such studies, the steps to be followed in conducting studies, the problems which may be encountered and the manner in which the results can be applied.

The House recognized that some societies are either not interested in relative value studies or are actively opposed to them. Thus, it remains for each state or county medical society to accept or reject the idea of a study in its area.

PHYSICIAN-HOSPITAL RELATIONS: Twelve resolutions on the subject of relationships between physicians and hospitals were received. The House did not act upon any of the resolutions but instead reaffirmed the 1951 "Guides for Conduct of Physicians in Relations with Institutions". It declared also that "all subsequent or inconsistent actions are considered superseded". It was also recommended that the House acknowledge the need to strengthen relationships with hospitals by action at state and local levels, that the AMA Board of Trustees continue to maintain liaison with the Board of the American Hospital Association and that the Council on Medical Service review the entire problem to ascertain if there have been actions inconsistent with the 1951 Guides.

The 1951 Guides summarize the following general principles as a basis for adjusting controversies:

"1. A physician should not dispose of his professional attainments or services to any hospital, corporation or lay body by whatever name called or however organized under terms or conditions which permit the sale of the services of that physician by such agency for a fee.

"2. Where a hospital is not selling the services of a physician, the financial arrangement if any between the hospital and the physician properly may be placed on any mutually satisfactory basis. This refers to the remuneration of a physician for teaching or research or charitable services or the like. Corporations or other lay bodies properly may provide such services and employ or otherwise engage doctors for those purposes.

3. The practice of anesthesiology, pathology, physical medicine and radiology are an integral part of the practice of medicine in the same category as the practice of surgery, internal medicine or any other designated field of medicine."

SCHOLARSHIP PROGRAM: In an effort to meet the need for an increasing number of physicians in the future, the House approved the creation of a special study committee. The Committee was asked to (1) present a scholarship program, (2) ascertain the maximum to which medical schools could expand their student bodies while maintaining the quality of medical education, (3) ascertain what universities can support new medical schools with qualified students and sufficient clinical material for teaching, (4) investigate the securing of competent medical facilities, (5) investigate financing of expansion and establishment of medical schools, (6) investigate financing of medical education as to the most economical methods of obtaining high quality medical training, (7) develop methods of getting well qualified students to undertake the study of medicine, and (8) investigate the possibility of relaxing rigid geographic restrictions on the admission of students to medical schools.

Miscellaneous....

PHILIP B. PRICE, M.D.
Salt Lake City, Utah

Popular View of Doctors Not Accurate.

What sort of person is a doctor of medicine?

That depends on how you look at him.

The popular view of the medical man has never been an accurate one.

Time was when the physician was conceived as being a well-loved, highly respected figure, a cultured gentleman and acknowledged leader in his community, a lifelong friend and confidant of patients and their families. That romantic image of the doctor may indeed have had some basis of fact, but it was too good to be strictly true.

Our own hypercritical generation has swung into the other extreme. It has developed a concept of the medical man that is essentially a caricature. The doctor has become a favorite target of cartoonists and jokesters who represent him either as an elegant fop putting something over on his patients, or as an old fuddy-duddy forever getting into awkward situations.

It has become fashionable to be critical of medical men, logically or illogically, for any one of a numbers of reasons—for big fees, for over-specialization, for referring patients to one consultant after another, for failure to keep appointments promptly, for refusals to respond to night calls, for inability in some instances to effect complete cures or achieve perfect surgical results.

Doctors as a group are considered fair game for deadbeats and malpractice suits. They may even be hated because they appear to profit from other people's misfortunes, or because the medical profession is believed by some (erroneously) to be a sort of exclusive fraternity dedicated primarily to protecting its own interests, or because the American Medical Association is said to oppose unlimited extension of welfare medicine and "everything else that is progressive."

And here is a strange paradox. Most people like and respect their personal physicians even though they may castigate the profession as a whole.

The average citizen marvels at present-day medical knowledge and skills, but does not hesitate to criticize the profession that possesses that knowledge and practices those skills. Americans have come to demand good health as a right but don't always feel kindly toward those upon whom they must depend for good health.

Although the present generation possesses a general knowledge of medicine far exceeding that of any previous generation, it actually knows much less than its forebears about the personal and human side of doctors.

This unfortunate state of affairs—this deterioration of relations between the medical profession and the public—is due in large measure to loss of friendly contact and lack of understanding.

Perhaps the most accurate picture of the doctor is obtained by those who view him as an individual person—as a husband and father, as a neighbor, as a golf partner or fishing companion.

There he is seen to be an ordinary, very human person. Like everyone else, he is compounded of virtues and faults. He is found to be intellectual but not uncomfortably smart; convivial but relatively temperate; idealistic yet down-to-earth; kindly but somewhat reserved; dominating in his office but often dominated at home; competent in many ways though far from infallible.

Viewed by intimate friends, the average doctor is seen to work long and hard, often putting in 60 or 70 or more hours a week not counting additional time spent in study and countless professional and scientific meetings. The very nature of his job requires an irregular schedule, so that meals, recreation, dinner parties, sleep and even vacations are constantly subject to unpredictable interruptions.

Tragedy and heartbreak become familiar experiences, but they never fail to take their emotional toll. Not infrequently the doctor gives his best efforts in self-sacrificing service only to find himself the target of criticism or suit. Small wonder the physician is prone to ulcers, high blood pressure, and coronary disease.

Life-long friends are aware that the doctor invested a surprisingly large amount of money ($20,000 to $40,000 in his education and training, that

EDITOR'S NOTE: This is one of a series of articles by Dr. Philip B. Price, Dean of the College of Medicine of the University of Utah. The series was published in The Salt Lake Tribune and is reprinted in the Monthly with the permission of Dr. Price.

he had to borrow additional sums to purchase equipment and set up his office, and that it took him years to pay off those debts.

They also know that his work entails relatively large overhead costs which must be paid each month before any income can go into his own pocket. They sympathize with his determination to provide a good education for his children and some of the good things of life and financial security for himself and his family, and especially for his wife who shared his long years of privation while he was in training.

It is not generally recognized, however, that setting and collecting fees is one of the most unpleasant aspects of medical practice. How can one evaluate humanitarian service in terms of dollars? What monetary value can be placed on alleviation of pain or restoration of health or saving of life? And yet the doctor cannot ignore this problem for he must meet overhead costs, support his family, and put aside something for a pensionless old age.

So the average doctor makes his charges in accordance with established fee schedules. He is fortunate if he can collect 80 to 90 per cent of the money due him. Cheerfully and without fan-fare, he does a lot of charity and "courtesy" work for which he receives no fees at all.

Only those who know the doctor best—his wife, secretary, and colleagues—can see beneath the veneer of professional mannerisms and observe how the real person reacts to his work and responsibilities.

They see that he is proud of his profession; that he takes his job seriously and conscientiously; that he is pleased and encouraged by his successes, is saddened and depressed by his failures, and is hurt by unjust criticism; that he is often tired, is sometimes discouraged, and never becomes quite immune to the sting of ingratitude; that he is genuinely concerned about the rising costs of medical care and worries because his patients have to pay so much for drugs and diagnostic laboratory tests and hospitalization, although he doesn't know what to do about it since those expenses stem primarily from present-day high costs of technology and labor.

So, what is the average doctor really like? Simply this: He is an ordinary fellow entrusted with extraordinary responsibilities; a mixture of virtues and faults; generally competent and conscientious, but certainly no magician. As a member of the medical profession he may be criticized by the public, but as an individual he is respected by his patients and is loved by those who know him best.

Physical Therapy Condensed Bill

Following is a *condensed summary of the regulation relating to Physical Therapy in Virginia* effective June 27, 1958. For further details see Senate Bill 35 passed by the recent Virginia Legislature or Chapter 161 of the Acts of Virginia Assembly 1958.

Practice of Physical Therapy Means the Treatment Under Medical Prescription and Direction of bodily and mental disorders of any person by the use of physical, chemical and other properties of heat, cold, light, water, electricity or sound and by means of massage or mechanical, electronic and other devices whether such devices and procedures are for therapeutic or for retraining or rehabilitation purposes. The term "physical therapy" as used in this chapter does not include the use of Roentgen rays and radium for diagnostic or therapeutic purposes, or the use of electricity for shock therapy and surgical purposes including cauterization. Nothing in this definition shall be construed to limit or constrict the practice of any person licensed by the Board as other than a physical therapist; except as otherwise provided in Sections 54-276 to 54-276.7 *it shall be unlawful for any person to practice physical therapy without a valid unrevoked license issued by the Board of Medical Examiners.* These sections refer to exceptions and exemptions generally, including furnishing first aid, practice of religious tenets in ministration to the sick, work of dentists, pharmacists or optometrists within the scope of their usual professional activities, nurses, registered midwives, masseurs or other persons within the scope of their usual professional activities, out-of-state practitioners called into consultation with legally registered practitioners in this State, medical officers in service of the U.S.

It is unlawful for any person who is not registered under this chapter to use in connection with his name the letters or words R.P.T.—Registered Physical Therapist, P.T.—Physical Therapist, Physiotherapist, representations or insignia assert or imply that he is a registered physical therapist.

It Is Unlawful for a Registered Physical Therapist to Engage in the Practice of Physical Therapy Except on the Prescription or Direction of a Duly Licensed Doctor of Medicine, Homeopathy or Osteopathy.

An *Advisory Committee to the State Board of Medical Examiners* is created to assist the Board in carrying out the provisions of this chapter regulating the qualification, examination, registration and regulation of physical therapists.

The Committee shall be appointed by the Governor and shall be composed of five members, all of whom shall be physical therapists selected from the State at large.

The Committee shall, under the control, direction and authority of the Board of Medical Examiners provide the examinations both written or oral or both to be taken by applicants for registration as physical therapists and administer and grade such examinations. The results of such examinations shall be certified by the Committee to the Secretary of the Board, and the Board shall, on the basis of such examinations, issue or deny licenses to applicants to practice physical therapy; provided that any applicant who feels aggrieved at the result of the examination may appeal to the Board.

The Committee shall also assist the Board in matters pertaining to the regulations of physical therapists and practice of physical therapy and in the evaluation of evidence submitted in support of applications for physical therapist licenses through reciprocity, and in all other matters pertaining to physical therapy as the Board may request.

The physical therapy examination shall be on the following subjects as they apply to this particular branch of the healing arts:—anatomy, neuroanatomy, kinesiology, physiology, psychology, physics; and physical therapy as defined in this chapter as applied to medicine, neurology, orthopedics, pediatrics, psychiatry, surgery; medical ethics; and technical procedures in the practice of physical therapy. It is required that the person taking the examination make an average grade of 75% or more, with no grade lower than 70% on any one subject. The Board may prescribe rules and regulations for the conduct of the examination.

Each *candidate for examination must present evidence* satisfactory to the Board that he or she

a) Is a citizen of the U.S. or if not a citizen has filed a declaration of intention to become a citizen of the U.S.
b) Is twenty years of age or more.
c) Is of good moral character.
d) Is a graduate of an accredited high school or has completed the full equivalent of a grammar school and a four year high school course.
e) Is a graduate of a school of physical therapy approved by the Council on Medical Education and Hospitals of the A.M.A. or by the American Physical Therapy Association or is a graduate of a school outside of the U.S. or Canada which offers and requires courses in physical therapy acceptable to the Board on the advice of the Committee. The fee for the examination of physical therapists shall be twenty dollars.

The Board may in its discretion arrange for reciprocity with the authorities of other states and territories having requirements equal to those of Virginia. An applicant for a certificate or license to practice physical therapy through reciprocity shall be a citizen of the U.S. or if not a citizen must have filed a declaration of intention to become a citizen of the U.S. The fee for any such certificate shall be thirty dollars.

Examinations are given in September and February of each year. Application must be received by the Board at least two weeks prior to the date of the examination. The law does not provide for temporary licensure to practice physical therapy in Virginia for applicants who are eligible for registration by examination. The law does provide temporary licensure for applicants eligible to become registered by reciprocity, provided, registration is based on examination and not on "grandfather clause" registration.

Every certificate to practice physical therapy granted by the Board shall, *before the holder begins to practice,* be presented by him to the Clerk of the Circuit or Corporation Court wherein such practice is to be carried on. The Clerk shall record the name, residence, place and date of birth and source, number and date of the certificate and the school of practice to which the holder of certificate or license belongs.

Each certificate holder or licensee shall subscribe and verify under oath the matters above mentioned when the same have been so recorded, and if the verification is wilfully false, he shall be subject to conviction and punishment for false swearing as provided by law. The fact of such oath and record shall be endorsed by the Clerk upon each certificate or license presented, and the Clerk shall receive the sum of one dollar for each certificate holder or licensee so registered, which shall be his full compensation for all duties required under this chapter.

Every certificate to practice physical therapy shall expire on June 30 each year but shall be renewed annually by the State Board of Medical Examiners. The fee for this is one dollar.

Unprofessional conduct includes aiding and abetting a criminal abortion, practicing under an assumed name, improper use of narcotic drugs, false advertising or misrepresentation such as extravagant

claims, misrepresentation as to his system or school of practice, and practicing physical therapy independently of the prescription or direction of a licensed doctor of medicine, homeopathy or osteopathy.

If charges involving a physical therapist are considered by the Board, not less than 9 members shall sit as the hearing body, and a member of the Physical Therapy Committee shall sit with the members of the Board in an advisory capacity and without vote.

The license of a physical therapist shall be revoked if he is not a citizen and has failed to acquire citizenship within 7 years after having been granted such license.

The law provides the courts of the Commonwealth of Virginia jurisdiction and power to enjoin the unlawful practice of the healing arts, including the practice of physical therapy.

Child's Intelligence

Don't put three strikes against your child's mental ability until he—or she—has a chance to go to bat, Willard Abraham, Ph.D., of the special education department, Arizona State University, cautions parents in the October Today's Health, an American Medical Association publication.

Dr. Abraham is disturbed by parents who believe a child is mentally retarded when he really is not.

"Few of us are objective about our own," writes Dr. Abraham. "We see them as we want them to be or as we fear they are, but seldom as they really are. We usually enjoy thinking they're bright (whether they are or not), and that error may result in undue pressure, frustration, and disappointment. But even more serious is the error of underestimating our child's intelligence, and not recognizing the importance of it."

Dr. Abraham devised a check list to aid parents who may be too close to their children to see them accurately. "It is especially effective for those of kindergarten age or slightly older and will help differentiate the youngsters who are among the less bright from those who seem to be retarded but actually might be near the top of the scale."

There's a caution sign attached to Dr. Abraham's check list statements: It's the idea that counts. The first part, taken by itself, may be a bit disturbing, so no conclusions should be drawn until the second part is read.

The question parents should ask is "Do both parts of the statement apply to my child?" For instance:

(1) He has a short attention span—doesn't stick to a task very long—but (2) he has many interests or hobbies as he jumps around mentally, hopping from one to another.

(1) His vocabulary often has a one-syllable limitation, but (2) once in a while he surprises you by accurately using words like practical, jet propulsion, historical and realistic.

(1) He seems to demand countless explanations of why he should brush his teeth, eat balanced meals, and wash his hands before eating, but (2) you get the feeling he was pulling your leg at the time when you overhear him patiently explaining these important facts of life to his little brother or sister, using terms much more understandably than you did with him.

Dr. Abraham calculated one "yes" answer on the 10-point list should give you an inkling that you've been wrong about your child; two to four should provide "concrete assurance," and five or more "yeses" ought to have a parent smiling inwardly with a secret apology because his child is brighter than he thought.

Once the problem of supposed mental retardation is out of the way, Dr. Abraham urged parents to refrain from over-attentiveness as a child learns to stand on his own two feet.

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, review will be published shortly after the acknowledgement of receipt. However, we assume no obligation in return for the courtesy of those sending us books.

Antibiotic Therapy for Staphylococcal Diseases. Antibiotic Monographs No. 12. Editor by Henry Welch, Ph.D., Editor-in-Chief of Antibiotics & Chemotherapy and Antibiotic Medicine & Clinical Therapy. And Maxwell Finland, M.D., Associate Professor of Medicine, Harvard Medical School; etc. Foreword by Felix Marti-Ibanez. A Publication of Medical Encyclopedia, Inc., New York. 1959. xii-208 pages. Price $4.50.

A Guide To Antibiotic Therapy. By HENRY WELCH, Ph.D., Medical Encyclopedia, Inc., New York. 1959. 69 pages. Price $3.00.

Synopsis of Gynecology. By ROBERT JAMES CROSSEN, M.D., Associate Professor of Clinical Gynecology and Obstetrics, Washington University School of Medicine, St. Louis, etc.; DANIEL WINSTON BEACHAM, M.D., Assistant Professor of Clinical Obstetrics and Gynecology, Tulane University School of Medicine, New Orleans, etc.; WOODWARD DAVIS BEACHAM, M.D., Professor of Clinical Obstetrics and Gynecology, Tulane University School of Medicine, New Orleans, etc. The C. V. Mosby Company, St. Louis. 1959. 340 pages. Illustrated, including one figure in color. Price $6.50.

Guide to Better Health. The Life Extension Foundation. By HARRY J. JOHNSON, M.D., President, The Life Extension Foundation. Prentice-Hall, Inc., Englewood Cliffs, N. J. 1959. xxv-220 pages. Price $4.95.

Babies by Choice or by Chance. By ALAN F. GUTTMACHER, M.D. Doubleday & Company, Garden City, New York. 1959. 289 pages. Price $3.95.

Observations on Direct Analysis. The Therapeutic Technique of Dr. John N. Rosen. By MORRIS W. BRODY, M.D. With forewords by John N. Rosen, M.D., and O. Spurgeon English, M.D. Vantage Press, New York. 1959. 104 pages. Price $2.95.

Digestive System. Part I—Upper Digestive Tract. A compilation of paintings on the normal and pathologic anatomy. The Ciba Collection of Medical Illustrations. Volume 3. Prepared by Frank H. Netter, M.D. Edited by Ernst Oppenheimer, M.D. Commission and Published by Ciba. 1959. ix-206 pages. Price $12.50.

Current Medical References. Edited by Paul J. Sanazaro, M.D., Associate Professor of Medicine, University of California, School of Medicine. Lange Medical Publications, Los Altos, California. 1959. 535 pages. Price $3.50.

Handbook of Poisoning. Diagnosis and Treatment. By ROBERT H. DREISBACH, M.D., Ph.D., Professor of Pharmacology, Stanford University School of Medicine, Stanford, California. Lange Medical Publications, Los Altos, California. 1959. 474 pages. Price $3.50.

Living Beyond Your Heart Attack. By EUGENE B. MOZES, M.D. Prentice-Hall, Inc., Englewood Cliffs, N. J. 1959. xii-212 pages. Price $3.50.

Mustard Plasters and Printer's Ink. A Kaleidoscope of a Country Doctor's Observations about People, Places and Things. By ALLAN H. MOORE, M.D. With a foreword by James A. Michener and an Introduction by Lindsay C. Warren. An Exposition-Banner Book. Exposition Press, New York. 1959. 262 pages. Price $3.50.

Master Your Tensions and Enjoy Living Again. By GEORGE STEVENSON, M.D., and HARRY MILT. Prentice-Hall, Inc., Englewood Cliffs, N. J. 1959. xii-241 pages. Price $4.95.

Pain and Itch. Nervous Mechanisms. In honour of Prof. med. Dr. Y. Zotterman, M.D., R.V.O. Ciba Foundation Study Group No. 1. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.C., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A. Little, Brown and Company, Boston. 1959. viii-120 pages. With 41 Illustrations.

Steric Course of Microbiological Reactions. In honour of Prof. Dr. V. Prelog. Ciba Foundation Study Group No. 2. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Cecilia M. O'Connor, B. Sc. Little, Brown and Company, Boston. 1959. viii-115 pages. With 37 Illustrations.

Heroic Sanctity and Insanity. An Introduction to the Spiritual Life and Mental Hygiene. By THOMAS VERNER MOORE, Carthusian (In Religion, Pablo Maria), Formerly Head of the Department of Psychology and Psychiatry and Director of the Child Guidance Center at the Catholic University of America, Washington, D. C. Grune & Stratton, New York. 1959. x-243 pages. Price $5.00.

A History of Ophthalmology. By GEORGE E. ARRINGTON, JR., M.D., Associate in Ophthalmology, Medical College of Virginia; Attending Ophthalmologist, Medical College of Virginia Hospital, Richmond Eye Hospital, Retreat for the Sick, and the Richmond Memorial Hospital. Foreword by Felix Marti-Ibanez, M.D., New York. MD Monographs on Medical History Number Three. MD Publications Inc., New York. 1959. xvii-174 pages. Cloth. Price $4.00.

There are various approaches towards medical history, one being anecdotal, another biographical, and a third doctrinal. The latter approach is the most recent, but also the most difficult one. Its aim is to relate the history of medicine to the history of human thought, to project ways of describing, classifying and identifying disease (diagnosis) as well as methods of cure (therapy) onto specific stages of civilization, levels of education and intelligence reached at each crucial period of medical history. It is this method which the author has selected and applied with great success. Thus we learn that ocular attention was sponsored by the specific and symbolic rôle ascribed to the eye in the thought, the law and the religion of early stages of civilization. The famous "eye for an eye" in the Babylonian

code of medical ethics, and the "evil eye" are examples which can be traced back to antiquity and which persist in folklore even to our own times. To the Greeks we owe the historical and biographical concept of disease which sprang from their sense of tragedy and it is to the Greeks that the historian of ophthalmology must turn to discover the first outlines of the natural history of ocular disease. After the destruction of the Roman empire, medicine passed to the Arabs, known for their great contributions to mathematics and physics. It was during their era of prominence that optics took shape and established the first design of the eye as an optical instrument. In a sense they initiated physiological optics and from them a direct path leads to Leonardo da Vinci, Kepler, Platter, Scheiners and Descartes and ultimately to Donders and Helmholtz.

The increasing interest of men of the renaissance in the structure of the human body likewise contributed to ocular anatomy. The reader will find in Arrington's book many more examples illustrating the correlation of ophthalmological discoveries with the general trends of medical history and human history at large.

It remains to be said, that the author though not underestimating the importance of each ocular structure and function in health and disease, strives throughout the book to preserve the totality of vision. His main concern is the study of "seeing man."

WALTHER RIESE, M.D.

A Doctor's Life of John Keats. By WALTER A. WELLS, M.D. Vantage Press, New York. 1959. 247 pages. Price $3.95.

The author in this biographical study of the English poet, John Keats, has approached the subject from the medical viewpoint, but he is to be commended on having avoided a purely clinical detachment. While Keat's own experience as a physician and the medical aspects of his life history are presented, it is his life as a romantic poet that is emphasized. Dr. Wells, who shapes his presentation largely for the non-medical audience, seems to have a genuinely sympathetic feeling for Keats' tragically short life, and he has, by expertly chosen excerpts of poems, illustrated how they contradict Keats' contemporary critics' unjust misevaluation of his merit.

While the book is generally satisfying, one is a little dismayed at the author's suggestion that Keats would have done better to "go along, at least a little" with the profession of medicine which he forsook for poetry. Can we really demand so much from genius to ask conformity in those who formulate new trends and styles or stability in those who by their creativity dishabilitate stability? Shall we never learn just to accept the value of having unconventional and controversial original figures among us, and cease trying to compress them into uninspired routines?

The author makes short excursions into medical history and the "mystery of genius", and skillfully relates these to his subject. The book is a fresh and at times a tender picture of the poet and should interest physicians from a general rather than from a medical viewpoint. It makes interesting reading for recreation and cultural embellishment so vital to the physician's life and it may lead one to a renewed interest in reading Keats' works again.

G. E. ARRINGTON, JR., M.D.

Synopsis of Ophthalmology. By WILLIAM H. HAVENER, B.A., M.D., M.S. (Ophth.), Professor and Chairman, Department of Ophthalmology, Ohio State University; Member, Attending Staff, University Hospital, Columbus; etc. The C. V. Mosby Company, St. Louis. 1959. 28 pages. With 189 illustrations. Price $6.75.

This Synopsis of Ophthalmology has achieved the author's stated purpose "to present the practical viewpoint of the practicing ophthalmologist to help physicians in the diagnosis and management of eye diseases". The book should be a useful aid to the general practitioner desiring to review the essentials of ophthalmic practice. It can also serve as a quick survey of the subject for undergraduate medical students or first year residents of ophthalmology. It makes no claim as a complete or definitive text and should be taken only for what it is—a survey—a general view of the subject. The material which is presented is concise, clearly stated, and well organized in chapters on Eye Examination, Diagnosis and Management of Eye Injury, Diagnosis and Management of the Red Eye, Medical Ophthalmology, Neuroophthalmology, Glaucoma, etc. An excellent approach is found in the chapter, The Meaning of Eye Symptoms. However one avoidable deficiency of the rest of the book is the underemphasis of the history, a vital element of medical thought even in synopses. Numerous photographic illustrations are excellent. The general practitioner will find the chapter on the Value of Consultation and Referral especially helpful. A short glossary of ophthalmological terms is included. The book is recommended to general physicians and medical students to be used within the limits of its purpose.

GEORGE E. ARRINGTON, JR., M.D.

Woman's Auxiliary . . . .

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Letter from the President.

Dear Auxiliary President and Members:

New things are appealing. Certainly, a new year with its new possibilities, new work, new resolve, is no exception. May each member of the Virginia Auxiliary continue to exemplify the tradition of friendly fellowship and sympathetic service.

The Membership Chairman needs help and cooperation of EACH auxiliary member. All must help to contact and bring new members to meetings, promote good fellowship, endeavor to interest members who have resigned, to plan programs that will keep all members well informed about auxiliary projects.

The Community Service Chairman needs assistance, for what you do unselfishly in the interest of others is basically Community Service. Please tabulate the *number of hours* that individual members contribute to civic groups, voluntary and official health agencies. I will need a report of this to include in my report to the National Auxiliary.

All the other State Chairmen will need your help in promoting our projects and you should hear from them soon. The *State Chairmen* are requested to send the President and Chairman the same letter in planning for work in the component auxiliaries.

Please mark on your calendar February 10 and 11, 1960, the date of our Mid-Year Conference and Board Meeting, at The Medical Society of Virginia Headquarters Building, 4205 Dover Road, Richmond. Plan to attend, bring a report of your work up to that time, and hear some of our projects explained by the speakers.

Publicize your Auxiliary. Immediately after each meeting, write a brief account highlighting the speaker's message, the project the auxiliary is supporting or will engage in, and other news of public interest concerning your auxiliary work, for your newspaper and the Auxiliary page in the Virginia Medical Monthly.

Your President,
Virginia M. Porter
(Mrs. Walter A.)

Committee Chairmen of State Auxiliary.

Organization and Membership—Mrs. F. Clyde Bedsaul, Floyd

Finance—Mrs. Kalford W. Howard, Portsmouth

Program—Mrs. A. B. Gravatt, Jr., Kilmarnock

Legislation and Key Woman—Mrs. William F. Grigg, Jr., Richmond

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Revisions—Mrs. Thomas E. Haggerty, McLean

Publications—Mrs. Custis L. Coleman, Richmond

Bulletin—Mrs. C. C. Hatfield, Saltville

Recruitment—Mrs. Brooks L. Hargove, Jr., Portsmouth

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Safety—Mrs. George K. Brooks, Jr., Richmond

Civil Defense—Mrs. George G. Hollins, Norfolk

Leigh-Hodges-Wright Memorial Fund — Mrs. Edward S. Ray, Richmond

Members at Large—Mrs. Nash Thompson, Stuart

Philanthropic Fund—Mrs. W. M. Wattles, Lynchburg

American Medical Education Foundation—Mrs. Joseph E. Gardner, Harrisonburg

Student Loan Fund—Mrs. Lee S. Liggan, Irvington

Research and Romance of Medicine—Mrs. Rufus Brittain, Tazewell

Councilor to Southern Medical Association—Mrs. John H. Dellinger, Norton

Nominating—Mrs. E. Lynwood Bagby, Pearisburg

Year Book—Mrs. V. O. Choate, Galax

Northern Neck.

The fall meeting of this Auxiliary was held at Tides Inn, Irvington, on October 22nd. The president, Mrs. M. B. Lamberth, Jr., presided. Mr. Walther B. Fidler, Warsaw, was the guest speaker. At the conclusion of the meeting, some of the members enjoyed a cruise on the yacht "Miss Ann".

Norfolk.

The opening meeting of the Auxiliary to the Norfolk County Medical Society was held at the Norfolk Yacht and Country Club on September 22nd. The new president, Mrs. John Foster, presided. Other new officers are: president-elect, Mrs. Joseph T. McFadden; vice-presidents, Mrs. Nelson Payne, Mrs. Frank DeLaura and Mrs. William F. Gibbs; recording secretary, Mrs. Meyer Krischer; assistant recording secretary, Mrs. William S. Hotchkiss; corresponding secretary, Mrs. Daniel Anderson; assistant corresponding secretary, Mrs. Frederick Woodson; treasurer, Mrs. William Whitmore, Jr.; assistant treasurer, Mrs. Julius Snyder; parliamentarian, Mrs. Henry Boone; and historian, Mrs. Howard Kruger.

Following the meeting, members and their guests enjoyed a delightful luncheon and fashion show. The fashions were provided by Sarah Cohen and our own members were models.

The nurses training scholarship for 1959 was awarded to Frances Wicks, a June graduate from Norview High School. She started her training at Norfolk General Hospital on September 6th. The Auxiliary gives this three year scholarship annually and now has three students in training at local hospitals.

Doris Dale Rowell (Mrs. Frank E.)

Northampton-Accomac.

This Auxiliary held its fall meeting at the home of Mrs. Raymond K. Brown, Eastville. There were twenty-eight members and one guest present.

Officers for 1960 were elected and installed by Mrs. Walter Eskridge, as follows: President, Mrs. W. C. Henderson; vice-president, Mrs. Milton Kellam; secretary, Mrs. William F. Bernart; and treasurer, Mrs. John R. Hamilton.

Mrs. Hamilton told of The Accomac Nursing Home where forty-five patients can be accommodated. Bedside tables have been given to the Home and the Auxiliary voted to give $50.00 for a floor cleaner.

Mrs. Cynthia Warren of the Virginia Council on Health and Medical Care, Richmond, told of the Northampton High School's planned program for nurse recruitment, the Council's placements of doctors, and other phases of its work. She also spoke on Health in the Schools, both public and private.

Catherine Rush Trower (Mrs. E. H.)
Chairman, Press and Publicity

Tranquilizers in Skin Conditions

Tranquilizing drugs have "little to offer" in the treatment of patients with dermatological conditions, a Hayward, Calif., physician found after an extensive study which required four years to complete.

Dr. Wayne Wright, who reported his findings in the November 21 Journal of the American Medical Association, used nearly every type of tranquilizing drug in a study which involved a total of 740 patients, who were suffering from a wide variety of skin conditions. Many of the clinical cases were from the Travis Air Force Hospital in Fairfield, Calif.

Dr. Wright, who was assisted in his study by Drs. Jean S. Wright and Max Krause, concluded that there was only one type of dermatological condition which was helped by a tranquilizing drug. Nummular eczema, characterized by coin-shaped patches on the skin, was "definitely benefited" by one of the drugs, hydroxyzine hydrochloride. Enough patients were helped to "conclude that it merits a trial in treatment of patients with this condition."

As adjunctive therapy, the tranquilizers help to relieve itching, to produce sleep, and to allow dosage of steroids and certain hormones to be reduced.

The study revealed that the patients suffered many side reactions from this class or drugs whose principal effect is to calm down nervous, anxious, excited and agitated people. Minor side effects of the drugs used were blurred vision, nasal congestion, dryness of the mouth, changes in the pulse rate and constipation. The most serious side reactions were convulsions.

Editorials . . . .

Dr. Barksdale's Gift to the Commonwealth



THE CHARGE is frequently made by critics of the medical profession that we doctors do not take our community responsibilities as seriously as we should. We have been told that we are parsimonious, that we do not take sufficient interest in civic matters and that our citizenship generally leaves much to be desired. The writer feels that this criticism, in the main, is unjust, and stems largely from a desire to discredit us by those who wish to see our present system of private practice supplanted by some form of state medicine.

Be the cause what it may, the feeling is widespread and anything that tends to disprove it places American medicine in a more favorable light. Such an example, fortunately, occurred in Richmond on the seventh of October when Mrs. Barksdale unveiled a life-size statue of Edgar Allan Poe, which her late husband, Dr. George Edward Barksdale, had given to the Commonwealth of Virginia. Busts and portraits have been received by the State from individuals but this is the only example of a statue being given by an individual donor that the writer can recall. This is also the only statue in Capitol Square that is not primarily military in character, which is probably just as well, for our Northern friends are prone to point out that Virginians hold literature in low esteem and honor only the soldier.

The donor, Dr. Barksdale, was born in Charlotte County in 1869. He studied pharmacy and later medicine at the University College of Medicine. Following his gradu-

ation in 1899 he taught materia medica and pharmacology at the College and practiced in Richmond until he entered the Army at the beginning of World War I. He later transferred to the Veterans Administration and was located at Oteen, North Carolina, from 1924 until his retirement in 1936. He then studied painting and became a Fellow of the Pennsylvania Academy of Fine Arts. Dr. Barksdale specialized in religious and historical subjects and a number of his murals may be seen in churches throughout Virginia. He also made a nation-wide study of Civil War battlefields and was an authority on this subject.

Dr. Barksdale admired the writings of Poe from early boyhood but not until his retirement and return to Richmond was he able to honor his literary idol in this substantial manner. In 1956, he approached Governor Thomas B. Stanley and offered a bronze statue of Poe to Virginia "provided the Commonwealth . . . will provide a suitable site and substantial base for the statue to rest upon." Ironically Dr. Barksdale did not live to see his dream become a reality for his death occurred on the sixth of March, just a few months before the statue was unveiled by his widow on a grassy hillside near the Old Bell Tower in Capitol Square.

This memorial to the South's greatest creative writer was long overdue. Sporatic and abortive attempts had been made during the past half century to erect a statue to Poe in his adopted city. It fell to Dr. Barksdale to bring this about. His generosity will be remembered and the physicians of Virginia are indebted to him for this very tangible evidence that those who treat the ills of the flesh do not necessarily take their community responsibilities lightly.

Postscript to the Guest Editorial

ATTENTION is directed to this month's Guest Editorial by Dr. Mack I. Shanholtz, State Commissioner of Health, concerning a move on foot to place the control of milk under the State Department of Agriculture. This matter will be taken up by the Legislature which meets this January.

It is hoped that the thirteen graduates of the Medical College of Virginia whose photographs appeared on the cover of the November issue of the *Scarab* and who will serve in the current General Assembly (plus Dr. William A. Pennington, of Buckingham, whose name was omitted) will alert their 126 fellow legislators to the hazards of mixing politics with milk.

HARRY J. WARTHEN, M.D.

Society Activities.

The Norfolk County Medical Society

Announces a series of clinical lectureships and the annual spring clinic. The first lecture was held on November 17th and the guest speaker was Dr. Harold G. Wolff, Anne Parrish Titzwell, Professor of Neurology, Cornell Medical College, New York. His subject was Headache Mechanisms.

On January 19th, the lecturer will be Dr. Alton Ochsner, Director of the Ochsner Clinic, New Orleans. He will speak on Indications and Results of Vena Caval Ligation for Venous Thrombosis and again on The Relationship of Cigarette Smoking and Cancer of the Lung.

On February 16th, Dr. Kenneth Pickrell, Professor of Plastic Surgery, Duke University, Durham, will speak on The Early Treatment of Tumors of the Face, Mouth and Jaws.

On March 12th, the Annual Spring Clinic will be held at the Center Theatre.

Dr. Harrison Flippin will be guest lecturer on April 19th. He is professor of clinical microbiology, Graduate School of Medicine, University of Pennsylvania. His topic will be The Challenge of Micro-Organisms to Modern Antibiotics.

Virginia Society of Pathology.

Dr. David E. Smith, Charlottesville, has been named president of this Society. Dr. Geoffrey Mann, Richmond, was named president-elect.

The American Academy of General Practice

Will hold its 12th Annual Scientific Assembly, March 21-24, in Philadelphia. The program lists thirty-one prominent medical educators who will discuss a variety of subjects ranging from arthritis and anemia to surgery, geriatrics and mental health. There will be more than 100 scientific and 300 technical exhibits.

The Academy Assembly is this year combined with the Philadelphia Postgraduate Institute.

News Notes....

New Members.

Since the list published in the December issue of the Monthly, the following members have been admitted into The Medical Society of Virginia:

Kenneth Rone Baldwin, M.D., Richmond
Reneal Claire Cobb, M.D., Charlottesville
Carl Eugene Crimm, M.D., Annandale
Mark Joseph Fitzpatrick, M.D., Alexandria
James Vincent Gallagher, III, M.D., Alexandria
Joseph Erskin Gardner, M.D., Harrisonburg
James Russell Good, M.D., Richmond
James Peter King, Jr., M.D., Radford
Peter Van Cortlandt Moore, M.D., Charlottesville
James William Murphy, M.D., Newport News
Rudolph Joseph Naurath, M.D., Newport News
John Hulbert Parks, M.D., Charlottesville
George Gordon Ritchie, Jr., Richmond
Howard Carlisle Scott, M.D., Richmond
Lever Flegal Stewart, M.D., Charlottesville

Dr. Sutton Honored.

A portrait of Dr. Lee E. Sutton, Jr., was presented to the Medical College of Virginia on November 20th by former residents of the department of pediatrics. He has served as Dean of the School of Medicine and has been professor and chairman of the department of pediatrics since 1938.

American College of Physicians.

Mr. Edward R. Loveland has retired as executive secretary of The American College of Physicians after completing nearly thirty-four years of continuous service to the College. In 1956, Mr. Loveland was made an Honorary Fellow of the College. He became the first and only person other than a physician to be so honored.

Dr. Edward C. Rosenow, Jr., of Los Angeles, has been appointed to succeed Mr. Loveland. He took office on January 1st.

Norfolk Doctors Honored.

At the Christmas seal sale kickoff dinner of the Anti-Tuberculosis League of Norfolk, rewards were presented to Dr. N. G. Wilson and Dr. F. R. Trigg. These were for their outstanding work in tuberculosis control in the Tidewater area.

Dr. Paul D. Camp

Will head the Richmond Area Heart Fund drive to be held in February. He is a past president of the

Richmond Area Heart Association and is a member of the board of the American Heart Association.

Dr. Carolyn Moore McCue,

Richmond, has been elected to membership in the specialty section on cardiology of the American Academy of Pediatrics.

The Lewis-Gale Hospital,

Roanoke, recently celebrated its 50th anniversary. The Hospital was founded in 1909 by the late Dr. Joseph Lewis and the late Dr. Sparrell Gale. In 1912, at the untimely death of Dr. Lewis, Dr. W. R. Whitman, Sr., now chief of staff, came to the hospital. Beginning with a bed capacity of 26, the hospital has grown to a capacity of 185 beds at the present time.

At the anniversary celebration, many of the former interns and residents returned. The first intern at the hospital was Dr. S. Beverly Cary in 1912 and since that time there have been a total of 121 interns and residents who have finished their training at the hospital. Some 700 professional nurses have received their diplomas from the School of Nursing which was established in 1912.

At the banquet, which climaxed the festivities, some 600 doctors, nurses and hospital employees were in attendance. The highlight of the banquet was a testimonial to Dr. Whitman. Testimonials were also given to Dr. Paul Davis of the surgical staff, and Dr. Collins Nofsinger, chief of medicine, who had been associated with the hospital for many years.

Dr. Thomas L. Gorsuch

Will direct activities of the Waynesboro Chamber of Commerce during the coming year. He was elected president at the recent annual meeting.

Dr. Philip Jacobson,

Petersburg, was guest lecturer at Doctors Hospital in Baltimore in November. He delivered two lectures and served as moderator of a panel discussion of bleeding diseases. The lectures were under the auspices of the Postgraduate Institute.

Postgraduate Conference.

At the postgraduate conference to be held at the University of Virginia on January 18th, pulmonary function of the normal individual will be presented as a basis for evaluation and anesthetic management of patients with pulmonary disease. Carbon dioxide homeostasis and vaporization and uptake of anesthetic vapours will be discussed.

The following program will be presented: Pulmonary Function by Dr. William K. Hamilton, Professor of Anesthesiology, University of Iowa; Anesthesia Systems by Dr. Douglas W. Eastwood, Professor of Anesthesiology of the University of Virginia; Carbon Dioxide Homeostasis by Dr. Lucien Morris, Professor of Anesthesiology, University of Washington, Seattle; Anesthesia in Abnormal Pulmonary States by Dr. Hamilton; Vaporation and Uptake of Anesthetics by Dr. Morris; and Methods of Artificial Ventilation by Drs. Hamilton, Morris and Eastwood. A panel discussion and question and answer period will be held following these presentations.

The conference will begin at 8:30 A.M., and will continue until 5:00 P.M.

For Sale.

Owing to the recent death of Dr. Walter Lee Kline, his house (office) and complete medical equipment are for sale. Poquoson consists of six consolidated communities on the peninsula in York County, ten miles from Hampton. An assured practice is here for any doctor who cares to come and investigate. Write 1247 Poquoson Avenue, Poquoson, Virginia. *(Adv.)*

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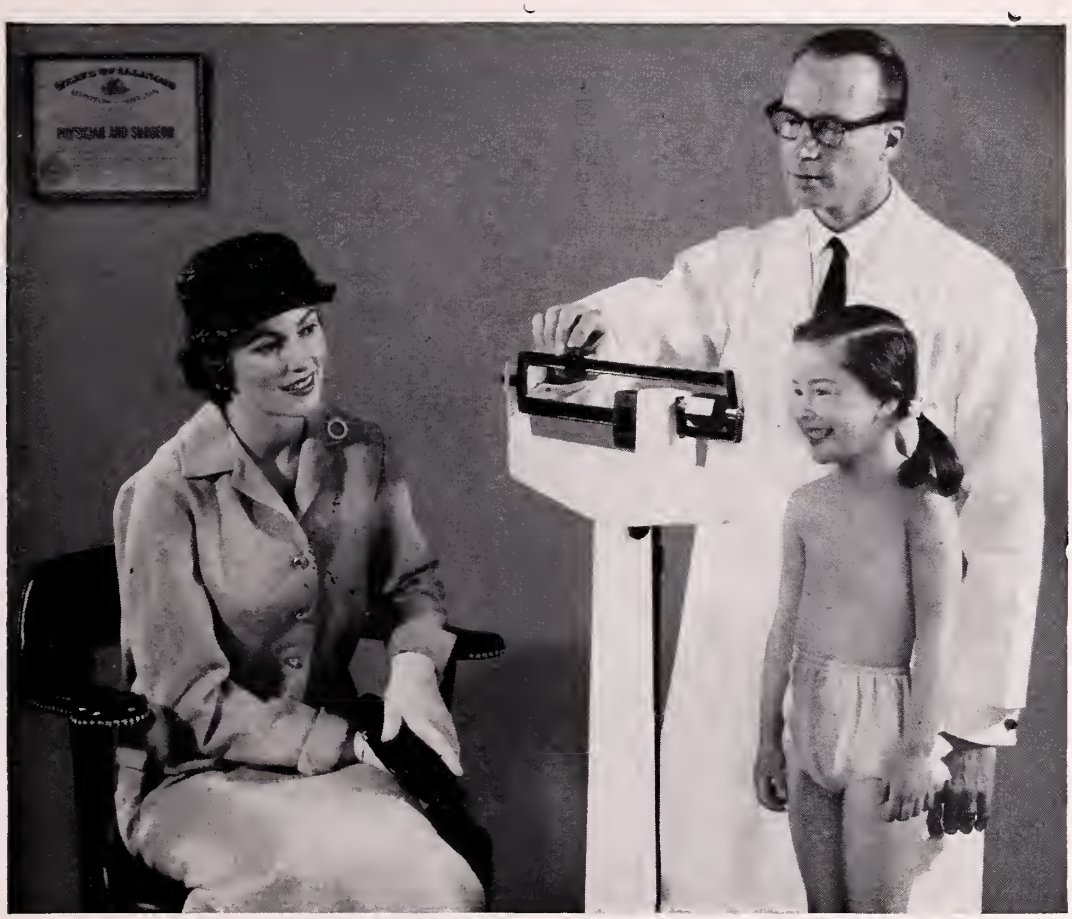
Obituaries . . . .

Dr. Sidney Johnson Tabor,

Portsmouth, died November 9th, at the age of ninety-three. He was a native of Tazewell County and a graduate of Vanderbilt University in 1892. Dr. Tabor served as surgeon for the Southern Railway at Williamson, West Virginia, and at Catlett. He then practiced at Pocahontas and Hopewell, before locating in Norfolk County forty-one years ago.

Dr. Tabor was a Life Member of The Medical Society of Virginia, having joined in 1894.

His wife and a grandson survive him.



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*Brown, S. S.; Libo, H. W., and Nussbaum, A. H.: Norethandrolone in the Successful Management of Anorexia and "Weight Lag" in Children, Scientific Exhibit presented at the Annual Meeting of the American Academy of Pediatrics, Chicago, Oct. 20-23, 1958.

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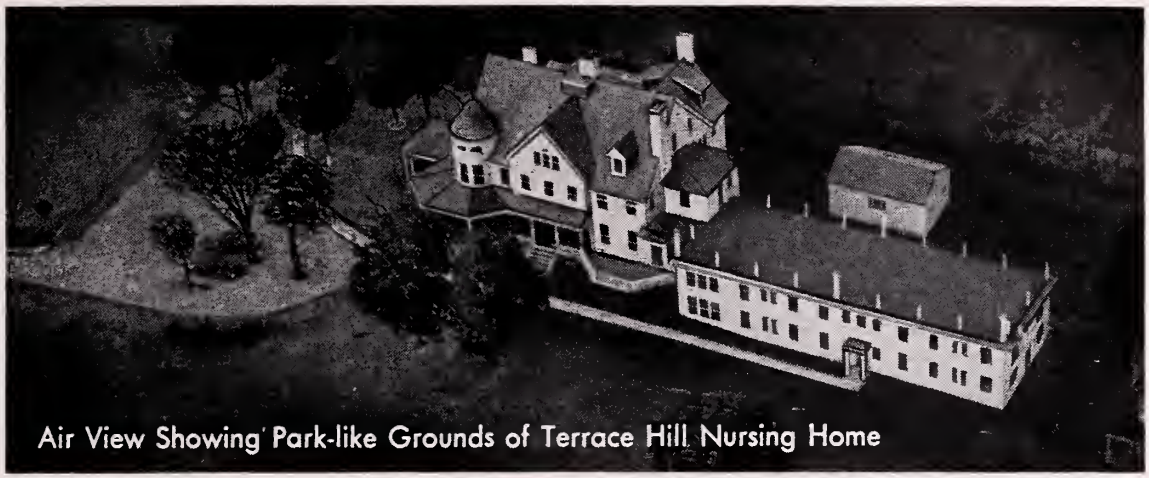
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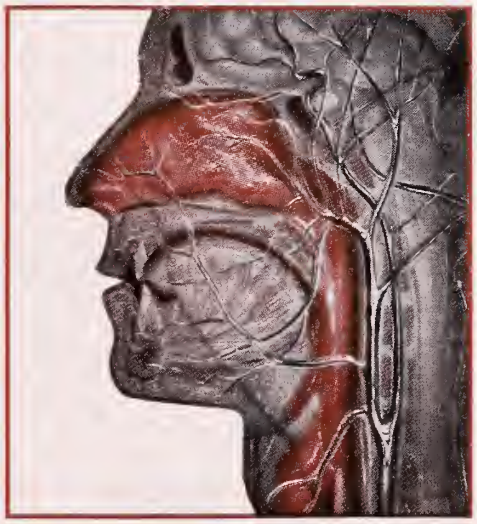
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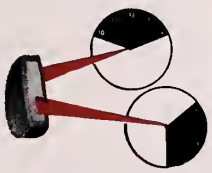
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- in nasal and paranasal congestion
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- provides longer-lasting relief
- presents no problem of rebound congestion
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1. Fabricant, N. D.: E.E.N.T. Monthly *37*:460 (July) 1958.
2. Lhotka, F. M.: Illinois M. J.: *112*:259 (Dec.) 1957.
3. Farmer, D. F.: Clin. Med. *5*:1183 (Sept.) 1958.

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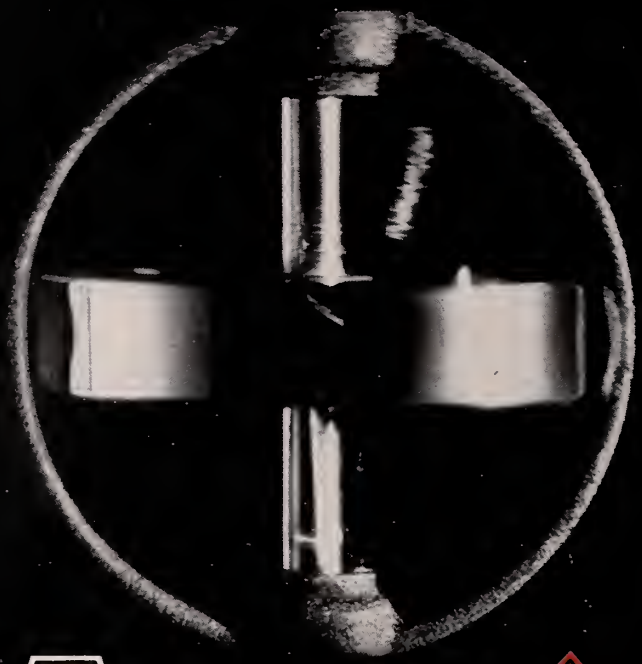
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References: 1. Feinberg, S.M., Feinberg, A.R., and Fisherman, E.W.: *J.A.M.A.* 167:58 (May 3) 1958. 2. Epstein, J.I. and Sherwood, H.: *Connecticut Med.* 22:822 (Dec.) 1958. 3. Friedlaender, S. and Friedlaender, A.S.: *Antibiotic Med. & Clin. Ther.* 5:315 (May) 1958. 4. Segal, M.S. and Duvenci, J.: *Bull. Tufts North East M. Center* 4:71 (April-June) 1958. 5. Segal, M.S.: Report to the A.M.A. Council on Drugs, *J.A.M.A.* 169:1063 (March 7) 1958. 6. Sherwood, H. and Cooke, R.A.: *J. Allergy* 28:97 (Mar.) 1958. 7. Duke, C.J. and Oviedo, R.: *Antibiotic Med. & Clin. Ther.* 5:710 (Dec.) 1958. 8. McGavack, T.H.: *Clin. Med.* (June) 1958. 9. Freyberg, R.H.; Berntsen, C.A., and Hellman, L.: *Arthritis and Rheumotism* 1:215 (June) 1958. 10. Hartung, E.F.: *J.A.M.A.* 167:973 (June 21) 1958. 11. Hartung, E.F.: *J. Florida Acad. Gen. Pract.* 8:18, 1958. 12. Zuckner, J.; Ramsey, R.H.; Caciolo, C., and Gantner, G.E.: *Ann. Rheum. Dis.* 17:398 (Dec.) 1958. 13. Appel, B.; Tye, M.J., and Leibsohn, E.: *Antibiotic Med. & Clin. Ther.* 5:716 (Dec.) 1958. 14. Kalz, F.: *Conod. M.A.J.* 79:400 (Sept.) 1958. 15. Mullins, J.F., and Wilson, C.J.: *Texas State J. Med.* 54:648 (Sept.) 1958. 16. Shelley, W.B.; Harun, J.S., and Pillsbury, D.M.: *J.A.M.A.* 167:959 (June 21) 1958. 17. DuBois, E.F.: *J.A.M.A.* 167:1590 (July 26) 1958. 18. McGavack, T.H.; Kao, K.T.; Leake, D.A.; Bauer, H.G., and Berger, H.E.: *Am. J. Med. Sc.* 236:720 (Dec.) 1958. 19. Council on Drugs: *J.A.M.A.* 169:257 (Jan. 17) 1959. 20. Rein, C.R.; Fleischmajer, R., and Rosenthal, A.R.: *J.A.M.A.* 165:1821 (Dec. 7) 1957.

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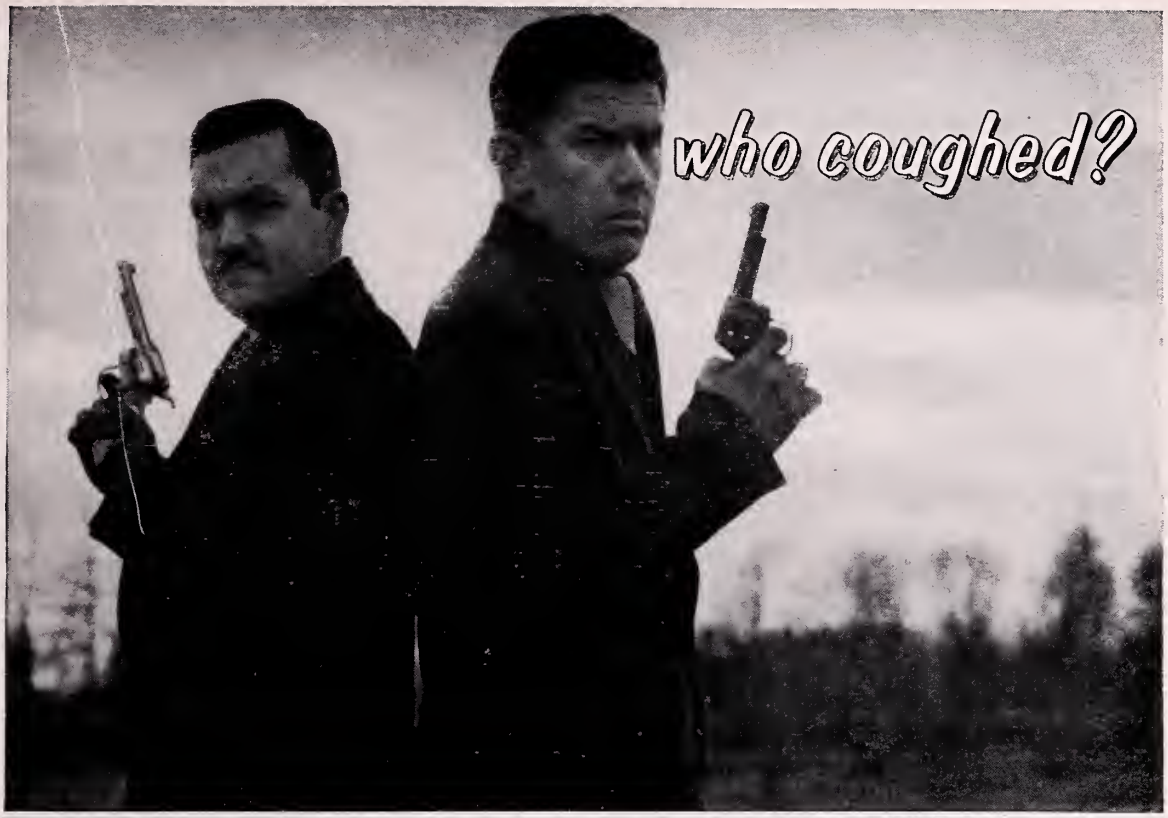
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1. Kuzell, W. C., and others.: Arch. Int. Med. 92:646, 1953. 2. Wolfson, W. Q.: J. Michigan M. Soc. 54:323, 1955. 3. Strandberg, B.: Brit. J. Phys. Med. 19:9, 1956. 4. Platt, W. D., Jr., and Steinberg, I. H.: New England J. Med. 256:823 (May 2) 1957.

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Page 669

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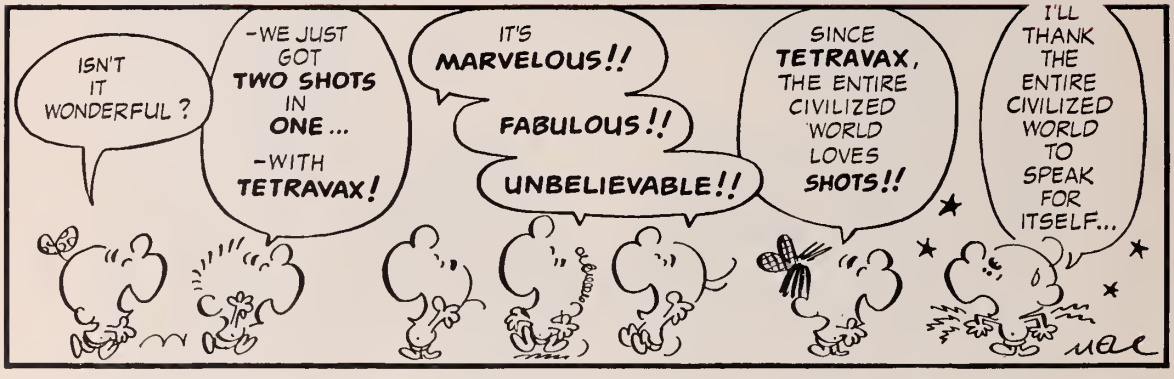
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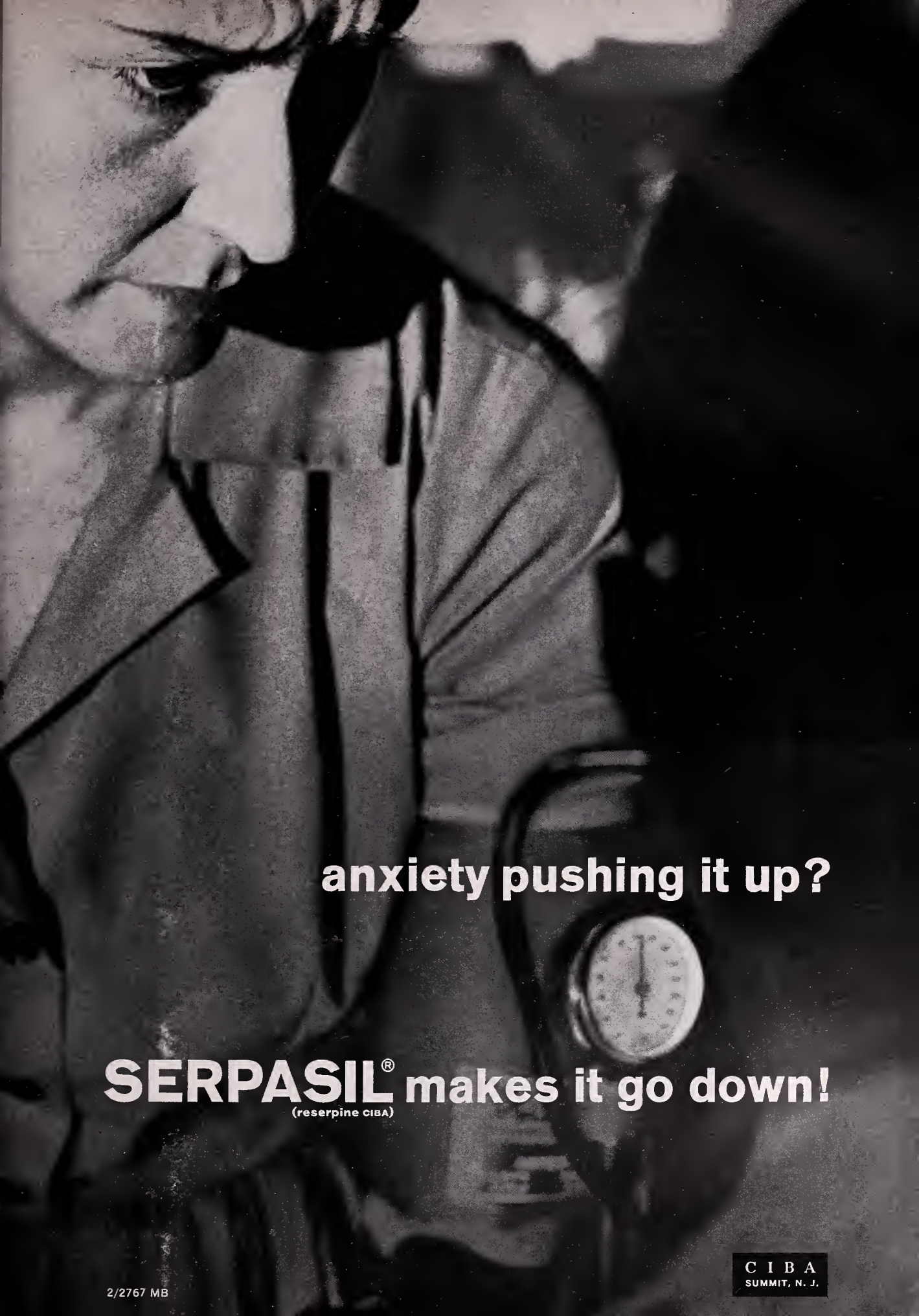
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safe and effective for patients of all ages suffering from respiratory tract congestion

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Adults and older children	1	2	three times daily
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Dosage: One tablet morning and night

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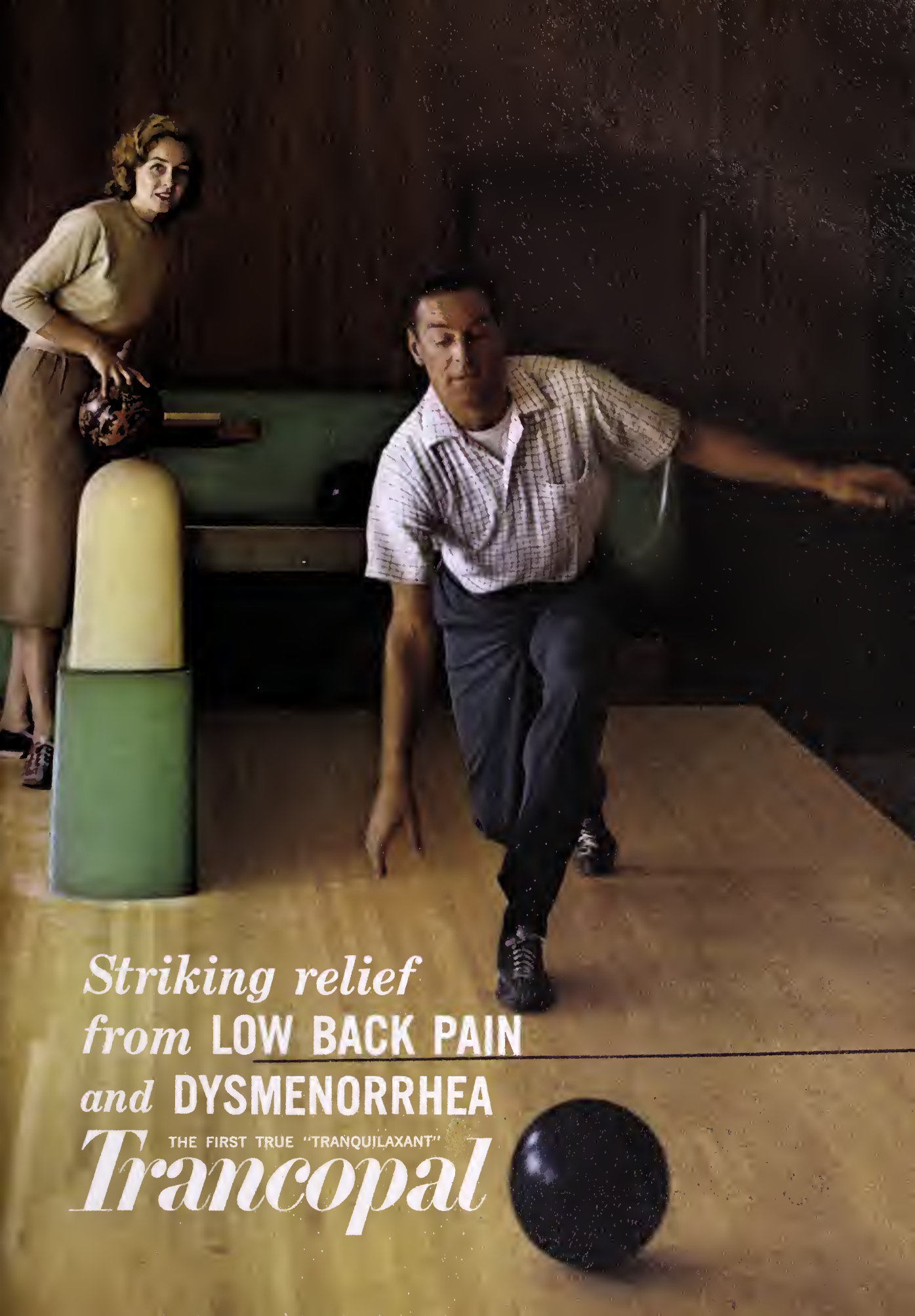
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THE FIRST TRUE "TRANQUILAXANT"
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Here is what you can expect when you prescribe

for dysmenorrhea

and premenstrual tension

Case Profile*

A 28-year-old married woman, a secretary in a booking agency, complained of severe and consistent pain and cramps in the abdomen during her menstrual periods. Psychologically, she described the first two days as "climbing the walls." Menarche occurred at age 13. She has a regular twenty-eight day menstrual cycle and a four day menstrual period.

Trancopal was given in a dose of 100 mg. four times a day for the first two days of the four day period. In addition to the relief of the dysmenorrhea she also noticed disappearance of a "bloated feeling" that had previously annoyed her. She has now been treated with Trancopal for one and one-half years with excellent results. Other medication, such as codeine or aspirin with codeine, had relieved the pain, but the patient had had to stay home. Because her father is a physician, many commercial preparations had been tried prior to Trancopal, but no success had been achieved.

Before taking Trancopal this patient missed one day of work every month. For the past year and a half she has not missed a day because of dysmenorrhea.



THE FIRST TRUE "TRANQUILAXANT"

Trancopal®

for low back pain



Case Profile*

A 42-year-old truck driver and mover injured his back while moving a piano. The pain radiated from the sacral region down to the region of the Achilles tendon on the right side. X-rays for ruptured disc revealed nothing pertinent. The day of the injury he was given Trancopal immediately after the physical examination. Although 100 to 200 mg. three times a day were prescribed, the patient on his own responsibility increased the dosage of Trancopal to 400 mg. three times a day. This dosage was continued for three days and then gradually reduced over a ten day period. During this time, the patient continued to drive his truck. The muscle spasm was completely controlled and no apparent side effects were noted.

For the past six months, the patient has continued to take Trancopal 100 to 200 mg. as needed for muscle spasm, particularly during strenuous days.

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Turn page for complete listings of Indications and Dosage.

THE FIRST TRUE "TRANQUILAXANT"

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potent MUSCLE RELAXANT

effective TRANQUILIZER

- In musculoskeletal disorders, effective in 91 per cent of patients.[1]
- In anxiety and tension states, effective in 89 per cent of patients.[1]
- Low incidence of side effects (2.3 per cent of patients). Blood pressure, pulse rate, respiration and digestive processes are unaffected by therapeutic dosage. It does not affect the hematopoietic system or liver and kidney function.
- No gastric irritation. Can be taken before meals.
- No clouding of consciousness, no euphoria or depression.

Indications [1-6]

Musculoskeletal:

Low back pain (lumbago, etc.)
Neck pain (torticollis)
Bursitis
Rheumatoid arthritis
Osteoarthritis
Disc syndrome
Fibrositis
Ankle sprain, tennis elbow
Myositis
Postoperative muscle spasm

Psychogenic:

Anxiety and tension states
Dysmenorrhea
Premenstrual tension
Asthma
Angina pectoris
Alcoholism

Now available in two strengths:



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100 mg. (peach colored, scored), bottles of 100.

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Trancopal Caplets,
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Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms occurs in from fifteen to thirty minutes and lasts from four to six hours.

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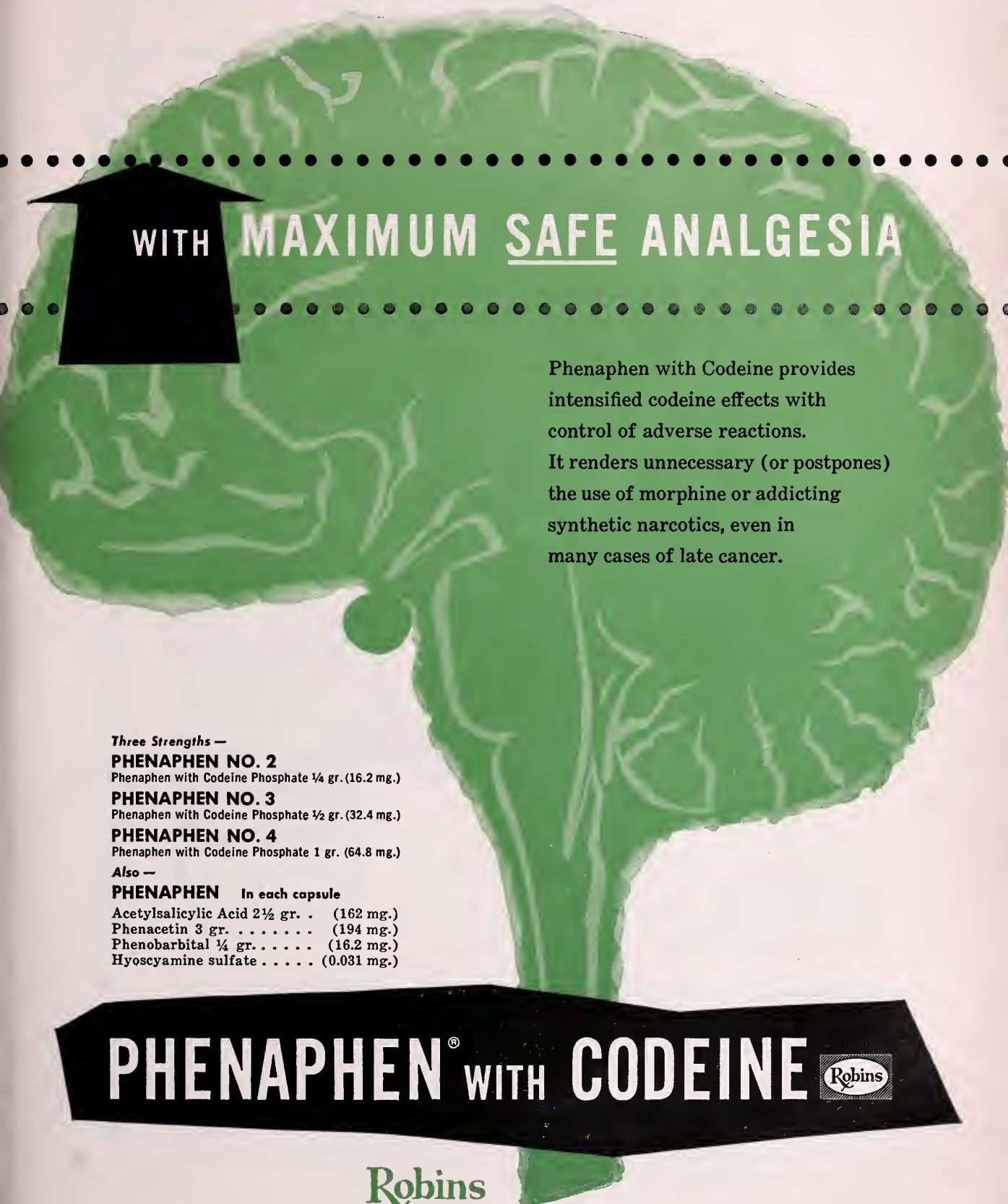
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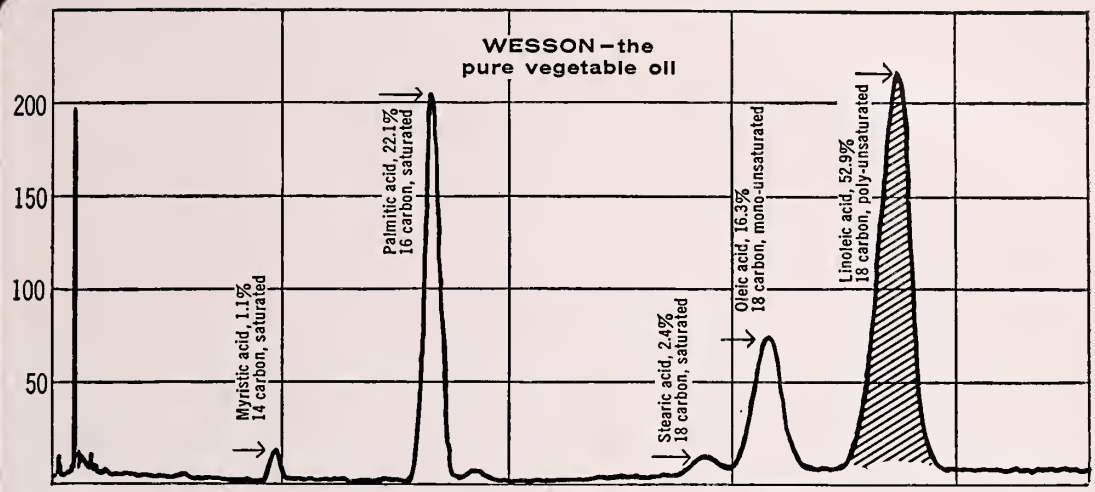
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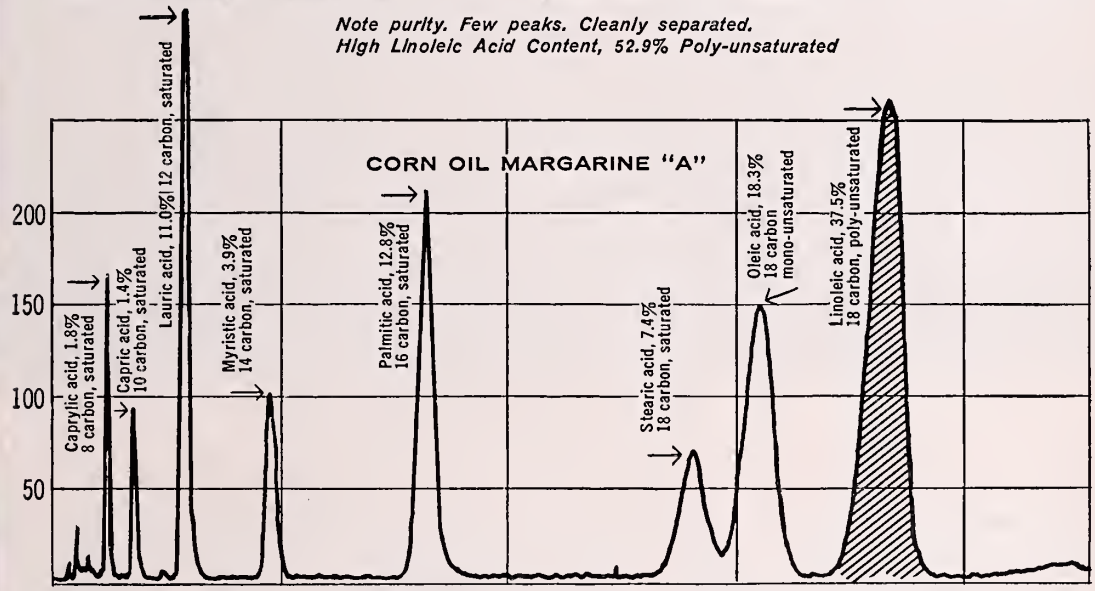
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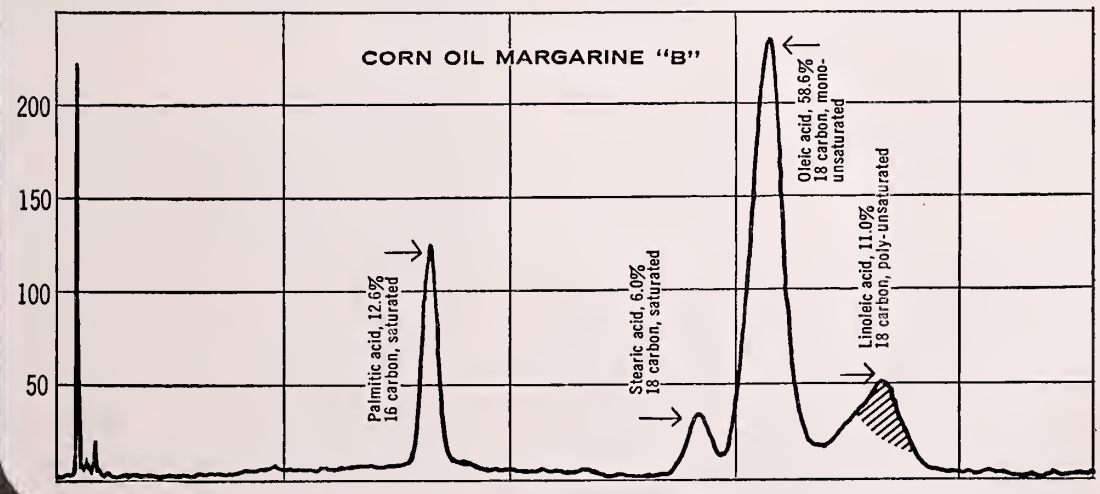
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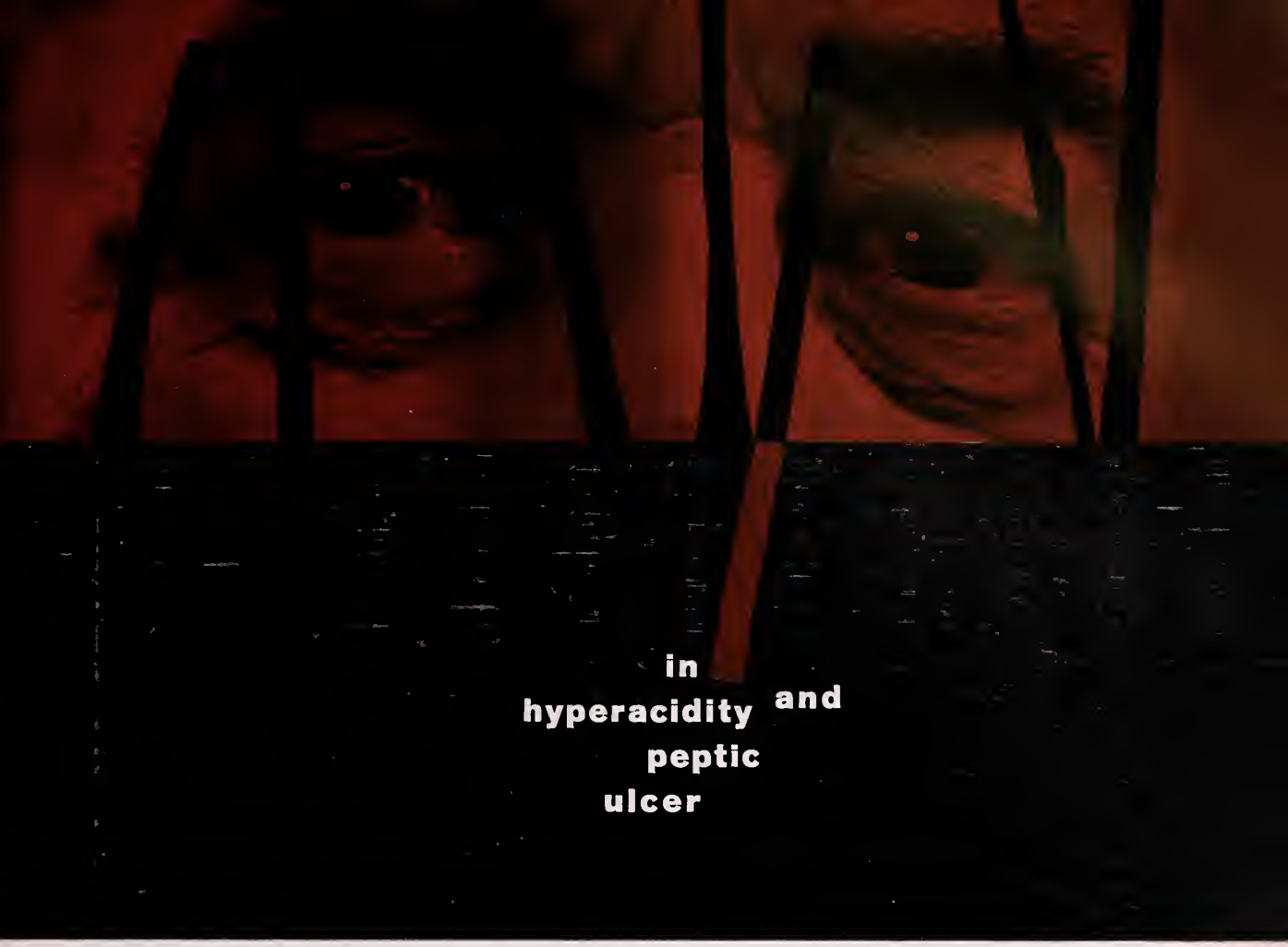
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INDEX TO ADVERTISERS

Abbott ---- 8, 82
American Health Insurance Corp. ---- 30
Ames Company, Inc. ---- Inside Back Cover
Appalachian Hall ---- 57
Armour ---- 108
Ayerst ---- 93
Brayten ---- 107
Bristol ---- 59-70
Burroughs Wellcome Co. ---- 47-48, 94
Burton, Frank ---- 106
Campbell-Stout Elevator Service ---- 9
Ciba ---- 40, 95
Davies, Rose & Company, Limited ---- 19
Drug Specialties ---- 91
Dyer, David A. ---- 29
Eli Lilly and Company ---- 54
Endo Laboratories ---- 85
First & Merchants ---- 86
Gill Memorial Eye, Ear and Throat Hospital, Inc. ---- 74
Geigy ---- 84
Glenbrook ---- 80
Jefferson, A. G. ---- 76
Johnston-Willis Hospital ---- 72
Jones and Vaughan ---- 7
Lederle ---- 11-18, 22-23, 41, 45, 78-79, 83, 90
Lorillard ---- 26
Mayrand, Inc. ---- 102
Medicine in Virginia ---- 101, 106
Merck Sharp & Dohme ---- 5, 49, 92
Parke, Davis & Company ---- Second Cover-3
People's Service Drug Stores ---- 36
Pfizer Laboratories ---- 43, 44, 81
Physicians Products Co., Inc. ---- 42, 96
Plyler's Nursing Home, Mrs. ---- 71
Raleigh Hotel ---- 101
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital ---- 74
Richmond Hotels Incorporated ---- 76
Riverside Convalescent Home ---- 73
Robins, A. H., Company ---- 37-39, 103
Roerig ---- 31, 77
Rucker, Dr. Marion Pierce ---- 72
Saint Albans ---- 56
Schering ---- 9, 24-25, 53, 101
Searle ---- 55
Smith-Dorsey ---- 75
Smith Kline & French Laboratories ---- Back Cover
Squibb ---- 34-35
St. Elizabeth's Hospital ---- 57
St. Luke's Hospital ---- 71
St. Paul-Western Insurance Companies ---- 6
State Board of Medical Examiners, The ---- 106
Stuart Circle Hospital ---- 56
Terrace Hill Nursing Home ---- 73
Tilden Company, The ---- 52
Today's Health ---- 86
Tucker Hospital, Inc. ---- 72
United States Brewers Foundation ---- 10
U. S. Treasury ---- 46
U. S. Vitamin Corp. ---- 50-51
Upjohn ---- 32-33
Valentine Company, Inc. ---- 76
Wallace Laboratories ---- 20-21, 87-89
Wesson Oil ---- 104-105
White Cross Hospital ---- 58
Williams Printing Co. ---- 86
Winthrop Laboratories ---- 27-28, 97-100



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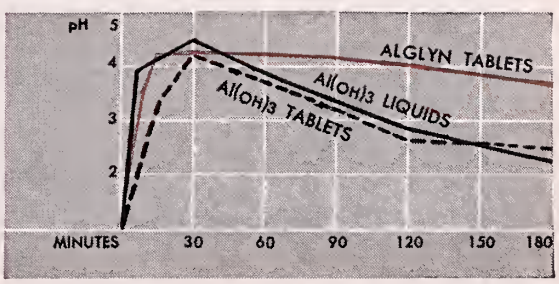
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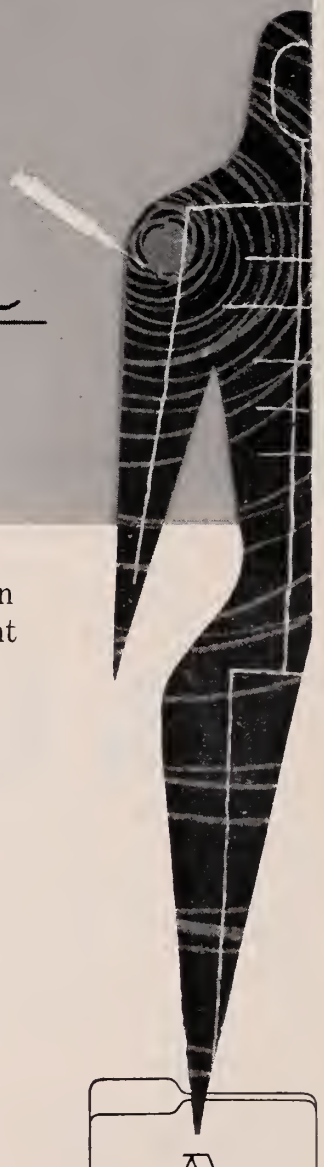
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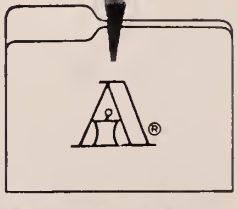
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Enuresis	7	6.4
Vomiting	5	4.5
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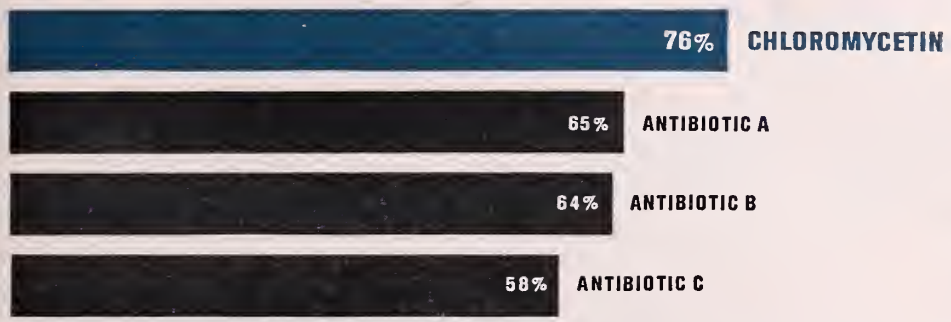
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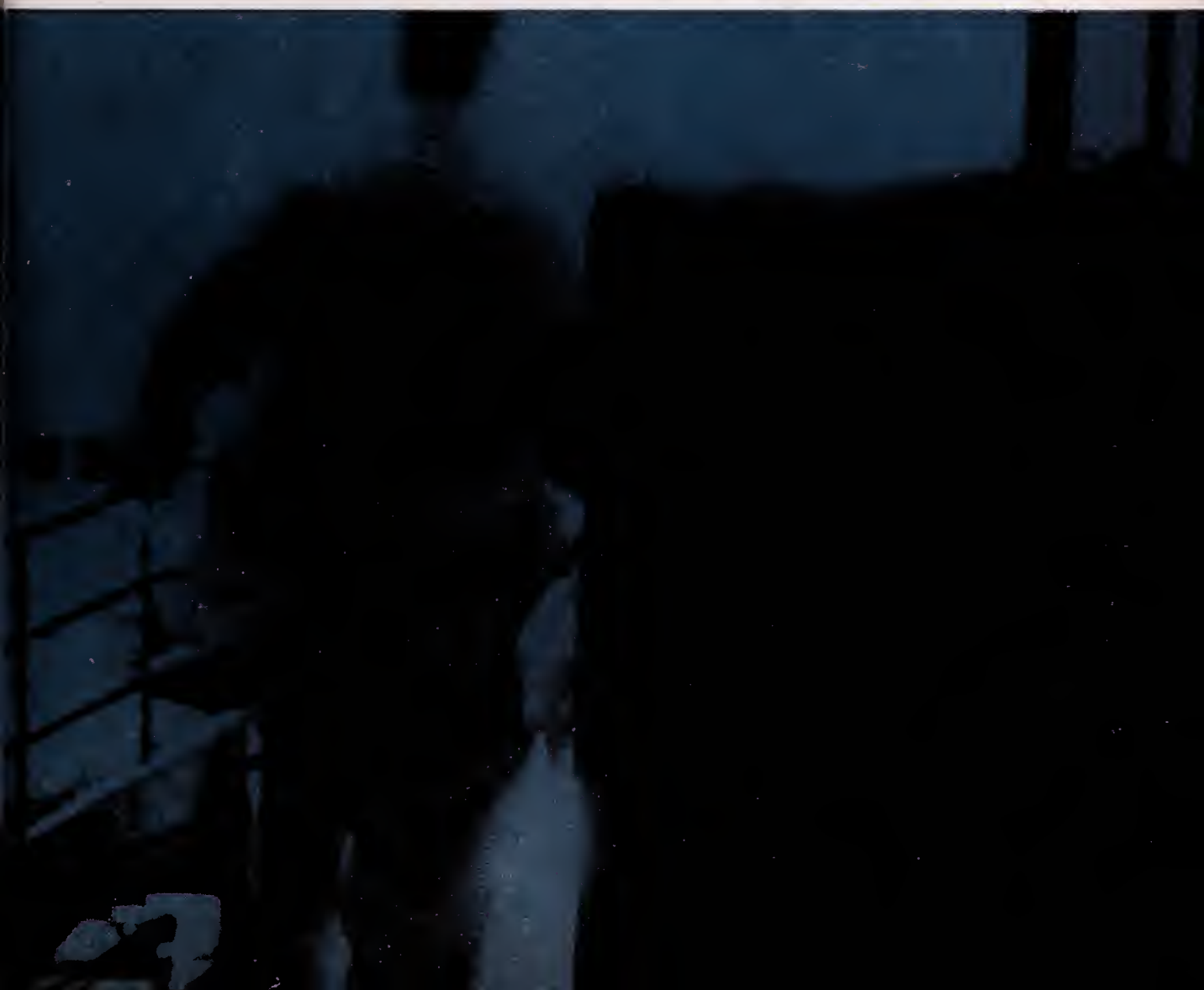


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*Adapted from Leming & Flanigan.[1]

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TABLE OF CONTENTS

GUEST EDITORIAL
Atherosclerosis—*Paul D. Camp, M.D.* 63

ORIGINAL ARTICLES
The Retarded Child—*Courtland H. Davis, Jr., M.D.* 66

Griseofulvin—*Harry M. Robinson, Jr., M.D.*, and *Raymond C. V. Robinson, M.D.* 72

Stapes Surgery—*Cary N. Moon, Jr., M.D.* 76

Hazards of Adrenocortical Therapy—*W. T. Thompson, Jr., M.D.* and *John J. Kelly, III, M.D.* 80

The Safety of Routine Vaginal Examinations in Labor—*T. Stacy Lloyd, Jr., M.D.* 84

A Comparative Study of Telepaque Dosage in Cholecystography—*Carl P. Wisoff, M.D.* 88

Cardiovascular Renal Complications of Pregnancy in Negro Women—*Nathaniel H. Wooding, M.D.* 91

Intrauterine Rupture of Omphalocele—*Armistead M. Williams, M.D., Philip L. Minor, M.D.*, and *Frederick P. Moore, M.D.* 94

Probable Periarteritis Nodosa with Rheumatoid-Like Arthritis—*A. A. Kirk, M.D., H. M. Kunkle, M.D.*, and *H. D. Cox, M.D.* 96

PUBLIC HEALTH
Typhoid Fever Outbreak Among Migrant Workers, Winchester, Virginia, 1959 100

MENTAL HEALTH
A Hopeful Trend in the Rate of "Significant Releases" from Mental Hospitals in Virginia 102

PRE-PAID MEDICAL CARE
Control of Utilization Through Planning 104

MISCELLANEOUS
The Role of the Physician in the Education of the Nursing Student 106

WOMAN'S AUXILIARY 107

EDITORIAL
Sudden Blanching of the Hair—*Harry J. Warthen, M.D.* 108

SOCIETY ACTIVITIES 110

NEWS NOTES 112

OBITUARIES 115

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INDEX TO ADVERTISERS—Page 96

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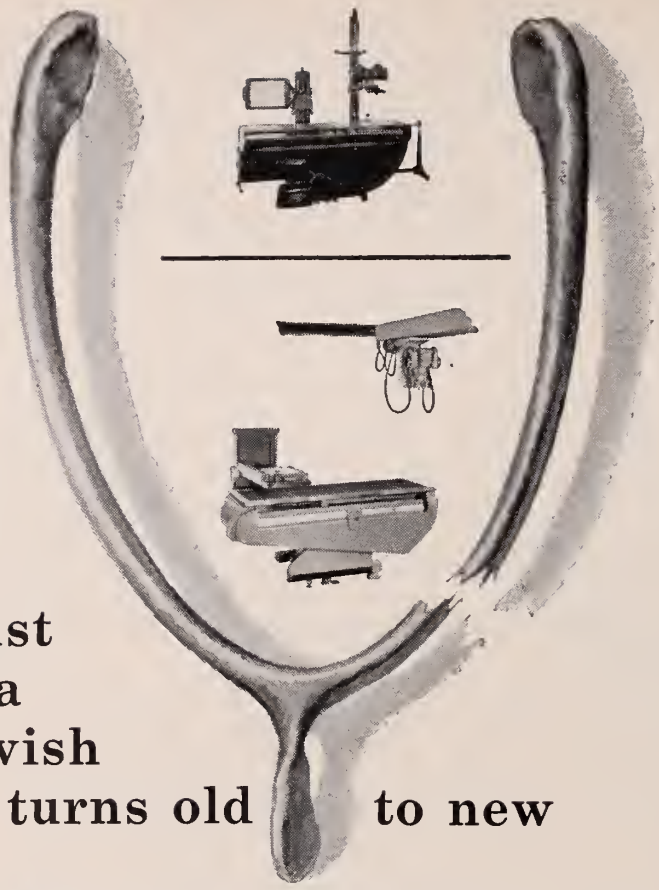
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1. Karnaky, K.J.: Med. Record and Annals, Houston 46:296 (Nov. 1952).

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REFERENCES:

1-11. Papers read at Seventh Symposium on Antibiotics, Washington, D. C., November 4-6, 1959.

12. Phillips, F. M.: DECLOMYCIN—Seventh Interim Report. Department of Clinical Investigation, Lederle Laboratories, Pearl River, N. Y., December 4, 1959.

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genitourinary infection. Roberts, M. S.; Seneca, H., and Lattimer, J. K.,[1] New York, N. Y.—Ninety-one per cent of the Gram-positive and 27 per cent of the Gram-negative, among 66 organisms cultured from genitourinary infection, responded to DECLOMYCIN. Serum antibiotic activity was found three times greater than with tetracycline.

toleration. Boger, W. P., and Gavin, J. J.,[2] Norristown, Pennsylvania—Side effects with DECLOMYCIN were minimal. When dosage was 0.5 to 1 Gm. daily in divided doses, only two of 82 patients exhibited nausea.

activity level sustentation. Kunin, C. M.; Dornbush, A. C., and Finland, M.,[3] Boston, Massachusetts—Of the four tetracycline analogues, DECLOMYCIN Demethylchlortetracycline showed the longest sustained activity levels in the blood.

gonococcal infection. Marmell, M., and Prigot, A.,[4] New York, N. Y.—Of 63 cases of gonorrhea, 61 promptly responded after short courses of DECLOMYCIN. Therapeutic effect was found equal to that of intramuscular penicillin.

bronchopulmonary infection. Perry, D. M.; Hall, G. A., and Kirby, W. M. M.,[5] Seattle, Washington—Of 30 cases of acute bacterial pneumonia, all were afebrile following two to 10 days of treatment with DECLOMYCIN. Results were good in 21.... All of six patients with acute bronchitis responded promptly.

pediatric infection. Fujii, R.; Ichihashi, H.; Minamitani, M.; Konno, M., and Ishibashi, T.,[6] Tokyo, Japan—In 309 pediatric patients with various infections, DECLOMYCIN was effective in 75 per cent.

urogenital infection. Vineyard, J. P.; Hogan, J., and Sanford, J. P.,[7] Dallas, Texas—Clinical response in pyelonephritis correlated well with results of *in vitro* sensitivity tests, which showed some strains of *A. aerogenes*, Proteus and Pseudomonas more susceptible to DECLOMYCIN Demethylchlortetracycline than to its analogues.

pneumonia. Duke, C. J.; Katz, S., and Donohoe, R. F.,[8] Washington, D. C.—Results were satisfactory in all but two of 32 cases of acute bacterial pneumonia, of which only 11 were uncomplicated. No side effects were observed.

brucellosis. Chávez Max G.,[9] Mexico, D. F., Mexico—All of nine patients with *Br. melitensis* infection were afebrile after five days on DECLOMYCIN. Blood cultures were negative in all cases on the 20th day. Side effects were limited to slight temperature increases which abated in four days.

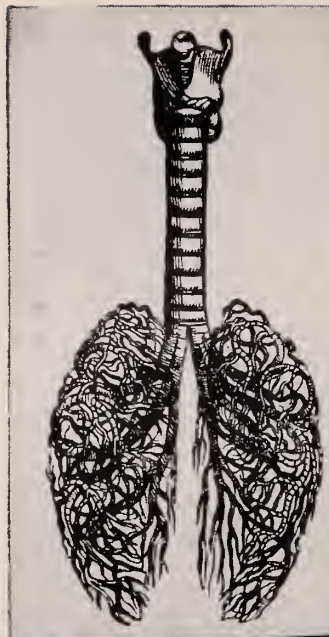
pustular dermatosis. Blau, S., and Kanof, N. B.,[10] New York, N. Y.—Results with DECLOMYCIN were excellent in both of two cases of impetigo, one of two cases of folliculitis, six of nine cases of furunculosis, all of three cases of acne rosacea and 26 of 45 cases of acne vulgaris. Overall, results were excellent or good in 85 per cent.

antibacterial spectrum. Finland, M.; Hirsch, H. A., and Kunin, C. M.,[11] Boston, Massachusetts—DECLOMYCIN Demethylchlortetracycline was found the most effective of the tetracycline analogues against two-thirds of 680 normally sensitive strains of 15 separate species.

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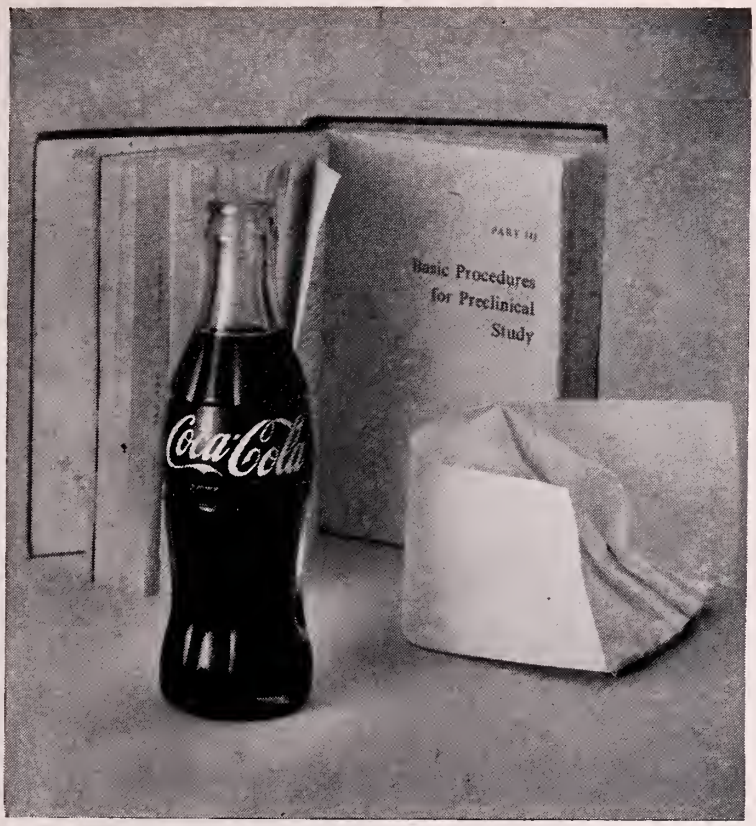
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Wein, A. B.: The Use of Carisoprodol in Orthopedic Surgery and Rehabilitation. Proceedings of the Symposium on The Pharmacology and Clinical Usefulness of Carisoprodol. Wayne State University Press, Detroit, 1959, p. 156.

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Cooper, C. D., and Epstein, J. H.: The Clinical Evaluation of Carisoprodol by a double-blind technique. Ibid. p. 97.

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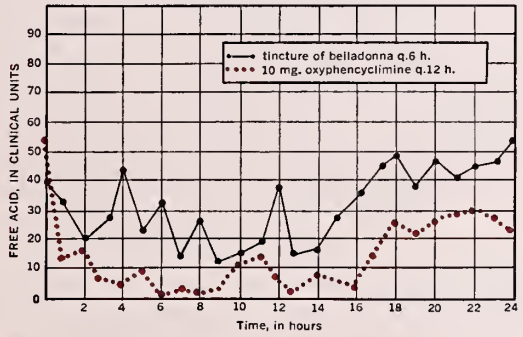
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References: 1. McHardy, G., et al.: J. Louisiana M. Soc. 111:290 (Aug.) 1959. 2. Steigmann, F.: Study conducted at Cook County Hospital, Chicago, Illinois, in press. 3. Kemp, J. A.: Antibiotic Med. & Clin. Therapy 6:534 (Sept.) 1959. 4. Leming, B. H., Jr.: Clin. Med. 6:423 (Mar.) 1959. 5. Data in Roerig Medical Department files.

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Preferably, antibiotic therapy should be based on pretreatment culture of the offending pathogen, but in bacterial pneumonia the problem may well be too pressing to permit the required delay of 24 to 48 hours. A differential diagnosis among bacterial pneumonias, based on such clinical grounds as speed of onset, sepsis and pain may guide the choice of antibiotic for initiation of therapy.

Should clinical judgment dictate that antibiotic therapy be started immediately, at the same time a sputum sample or a subglottic swab can be sent to the laboratory for culture and sensitivity studies. If the response to the first antimicrobial agent proves unsatisfactory, a reasonable basis for changing therapy will then be at hand.

Choosing the Antibiotic

Since therapy must be started at once for bacterial pneumonia, it is advisable to choose a broad-spectrum antibiotic that quickly produces high levels of active agent (e.g., tetracycline phosphate complex, TETREX). Such an antibiotic probably has the best chance of controlling the pathogen, whether it be gram-negative or gram-positive. And if the laboratory report shows that the invading organism is much less sensitive to tetracycline than to other agents, the patient can then be changed to an appropriate antibiotic. If the difference in sensitivity is slight, then the possibility of side effects, sensitization, and toxicity should be evaluated before changing therapy to another antibiotic.

The greatest number of bacterial pneumonias are caused by pneumococci, which respond very well to penicillin, tetracycline, and chloramphenicol. Also, these antibiotics are usually effective against the other gram-positive coccal pneumonias. But penicillin is ineffective against the viral pneumonias and the gram-negative *Hemophilus influenzae* and *Klebsiella pneumoniae*. Although *K. pneumoniae* causes only about 1 to 2 per cent of pneumonia cases on the average,[1] these are apt to be acute and fulminating (Friedländer's pneumonia), with a high mortality rate if not effectively treated. Since pneumococcal pneumonia may be difficult to distinguish clinically from Friedländer's, except by gram-stained sputum smear, it may be wiser to start treatment with an agent also effective against Klebsiella.

Penicillin, however, in addition to having a limited spectrum, also causes many minor and some serious sensitivity reactions. In a recent survey[2] it was found that penicillin produced severe skin reaction. But most important was the observation that anaphylactic shock, with a fatality rate of about 9 per cent, was the most frequent serious reaction. Such severe reactions are almost always associated with parenteral administration.

Tetracycline is also clinically effective in primary atypical pneumonia.[3]

The tetracyclines (e.g., TETREX) have the advantage of a broad range of antimicrobial activity and low toxicity. And in addition, the physician does not have to trouble himself or his patients with repeated blood studies when he prescribes TETREX. Minor reactions such as gastric upsets or mild skin rashes occur occasionally. The most serious side effects are staphylococcal and monilial overgrowth, but these are rare and can be adequately controlled.

No one would deny that appropriate antibiotic therapy has greatly reduced morbidity and saved many lives of patients with bacterial pneumonia. Nevertheless, general supportive measures in the care of patients remain important even today. Especially in the desperately ill patient, antibiotics are not considered as substitutes for the individual evaluation, clinical observation and judgment of the physician.

Some Micro-organisms Susceptible[a] to Tetracycline **(TETREX)[b]**

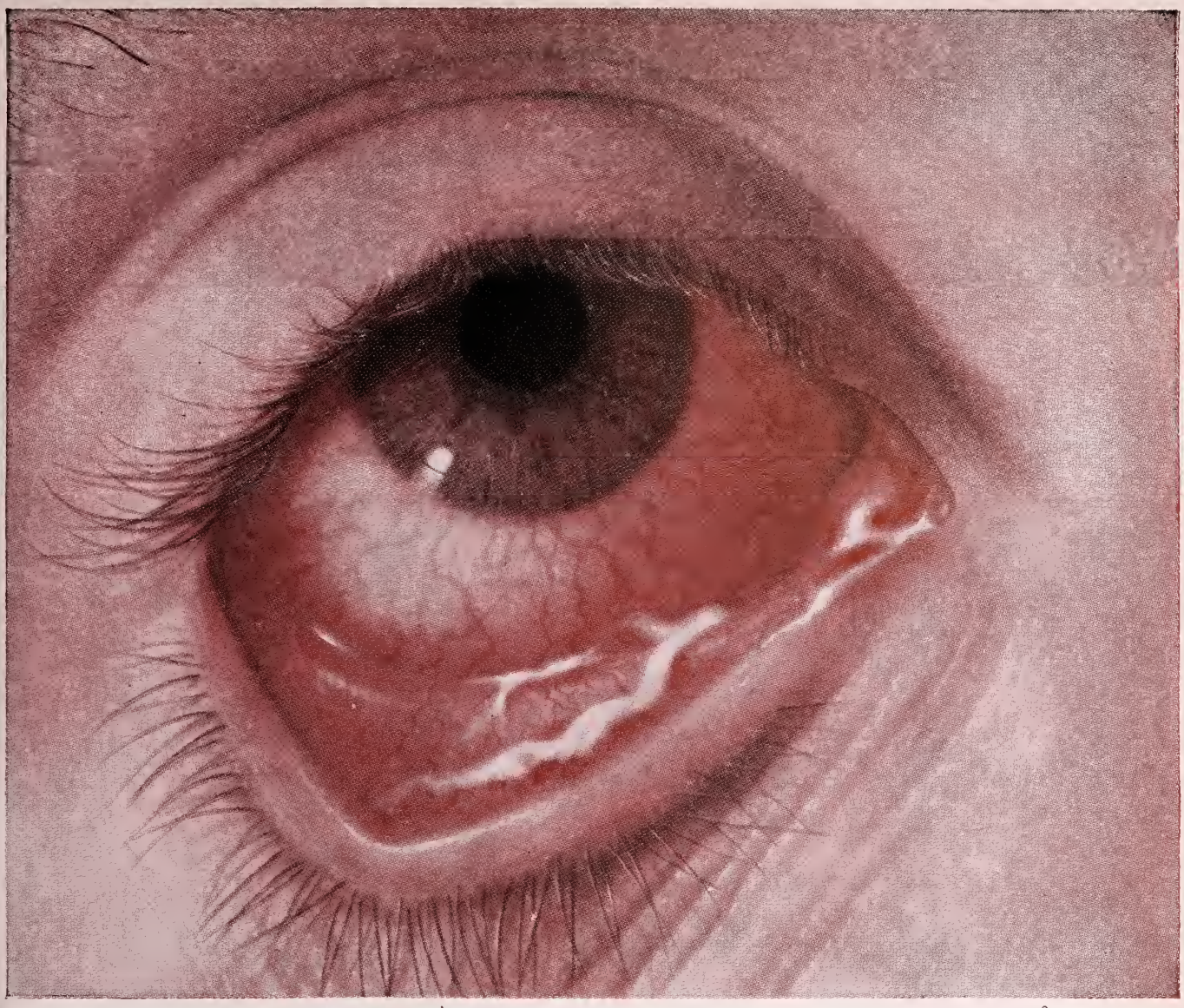
Streptococcus; Staphylococcus; Pneumococcus; Gonococcus; Meningococcus; *C. diphtheriae*; *B. anthracis*; *E. coli*; Proteus; *A. aerogenes*; *Ps. aeruginosa*; *K. pneumoniae*; Shigella; Brucella; *P. tularensis*; *H. influenzae*; *T. pallidum*; Rickettsiae; Viruses of psittacosis and ornithosis, lymphogranuloma inguinale, primary atypical pneumonia; *E. histolytica*; *D. granulomatosis.*

a Some strains are not susceptible.

b Table adapted from Goodman, L. S., and Gilman, A.: The Pharmaceutical Basis of Therapeutics. 2nd edition, New York, The Macmillan Co., 1956, pp. 1322-1323.

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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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1. Kuge, T.: To be published.

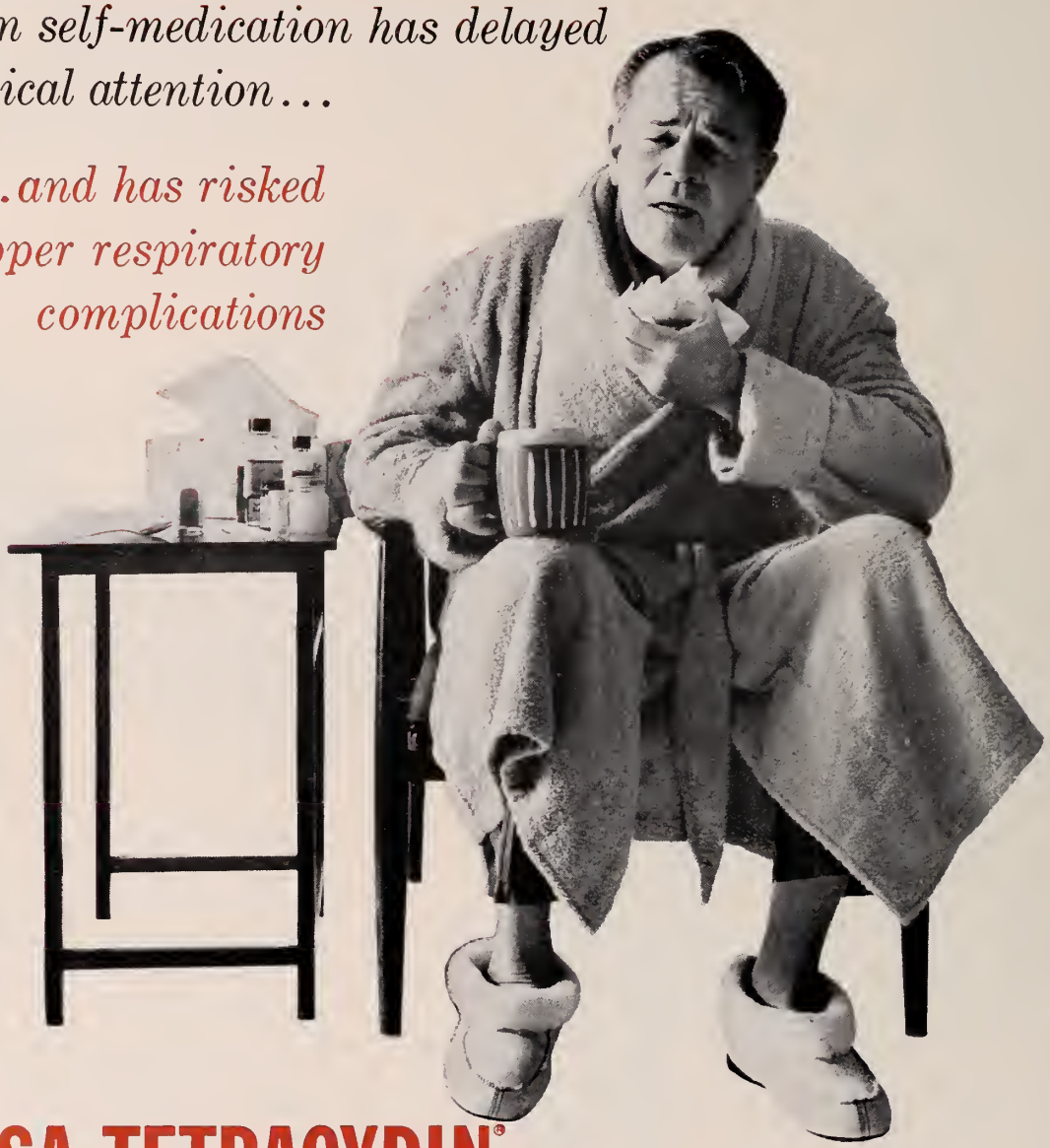
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virtually all runaway diarrheas.. promptly, effectively with



Donnagel®

Robins

or Donnagel® with Neomycin

Prompt and more dependable control of virtually all diarrheas can be achieved with the comprehensive DONNAGEL formula, which provides adsorbent, demulcent, antispasmodic and sedative effects—with or without an antibiotic. Early re-establishment of normal bowel function is assured—for all ages, in all seasons.

DONNAGEL: In each 30 cc. (1 fl. oz.):

Kaolin (90 gr.)	6.0 Gm.
Pectin (2 gr.)	142.8 mg.
Hyoscyamine sulfate	0.1037 mg.
Atropine sulfate	0.0194 mg.
Hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

DONNAGEL WITH NEOMYCIN

Same formula, plus

Neomycin sulfate	300 mg.

(Equal to neomycin base, 210 mg.)

A. H. ROBINS CO., INC., Richmond 20, Virginia · *Ethical Pharmaceuticals of Merit since 1878*

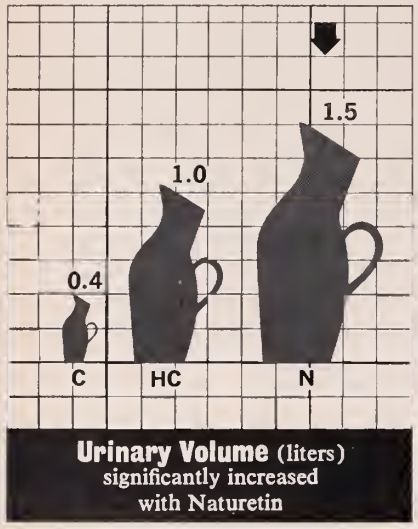
more closely approaches the ideal diuretic

Naturetin

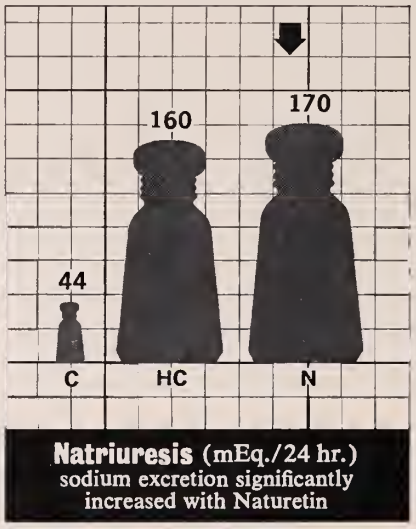
Squibb Benzydroflumethiazide

"When compared to other members of this heterocyclic group of compounds, this drug [NATURETIN] shows a significantly increased natriuresis and decreased loss of potassium and bicarbonate. In this respect it more closely approaches a natural or 'ideal diuretic.' It is effective upon continuous administration and causes no significant serum biochemical changes. It is effective in a wide variety of edematous and hypertensive states and represents a significant advance in diuretic therapy." *Ford, R.V.: Pharmacological observations on a more potent benzothiadiazine diuretic; accepted for publication by the American Heart Journal.*

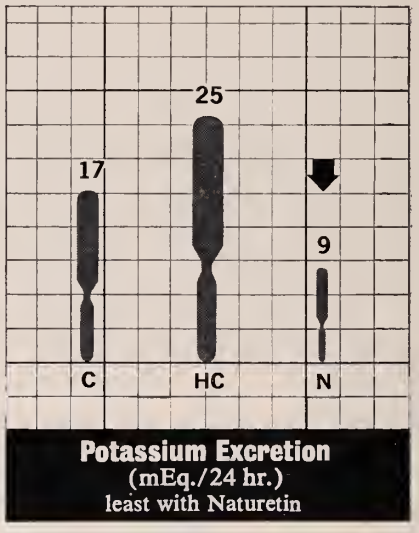
Comparison of electrolyte excretion pattern for the 24 hours following typical doses of chlorothiazide, hydrochlorothiazide, and Naturetin[1]



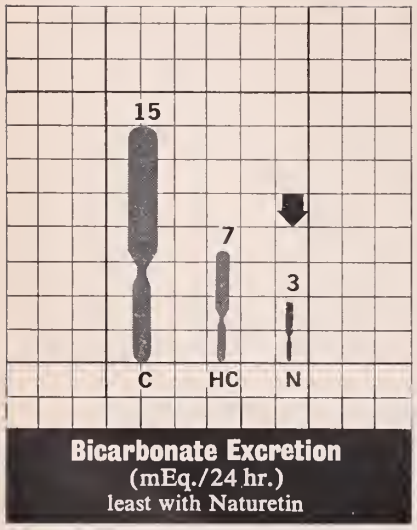
Urinary Volume (liters) significantly increased with Naturetin



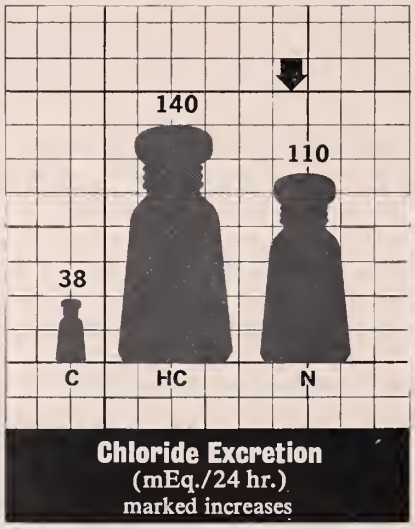
Natriuresis (mEq./24 hr.) sodium excretion significantly increased with Naturetin



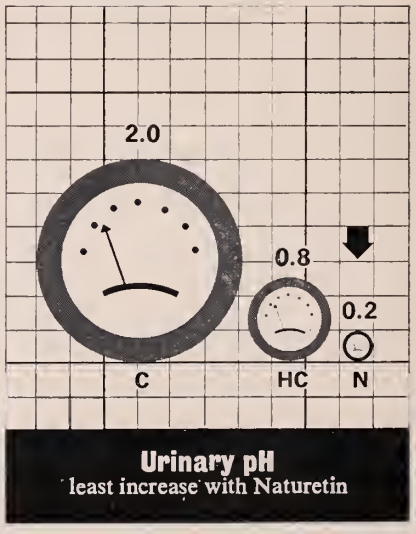
Potassium Excretion (mEq./24 hr.) least with Naturetin



Bicarbonate Excretion (mEq./24 hr.) least with Naturetin



Chloride Excretion (mEq./24 hr.) marked increases



Urinary pH least increase with Naturetin

Typical Doses: Chlorothiazide—1,000 mg.; Hydrochlorothiazide—50 mg.; Naturetin (Benzydroflumethiazide)—5 mg.

1. Adapted from: Ford, R. V. Squibb Clin. Res. Notes 2:1 (Dec.) 1959.

A single 5 mg. tablet once a day provides all these advantages[2]

- prolonged action — in excess of 18 hours
- convenient once-a-day dosage
- low daily dosage — more economical for the patient
- no significant alteration in normal electrolyte excretion pattern
- repetitively effective as a diuretic and antihypertensive
- greater potency mg. for mg.—more than 100 times as potent as chlorothiazide
- potency maintained with continued administration
- low toxicity — few side effects — low salt diets not necessary
- comparative studies with chlorothiazide, hydrochlorothiazide, and Naturetin disclose that smallest doses of Naturetin produce greater weight loss per day
- in hypertension, Naturetin, alone or in combination with other antihypertensives, produces significant decreases in mean blood pressure and other favorable clinical effects
- purpura and agranulocytosis not observed
- allergic reactions rarely observed

[2]Reports (1959) to the Squibb Institute for Medical Research.

Naturētin —*Indications:* in control of edema when diuresis is required, in congestive heart failure, in the premenstrual syndrome, nephrosis and nephritis, cirrhosis with ascites, edema induced by drugs (certain steroids); in the management of hypertension, used alone, combined with Raudixin (Squibb Rauwolfia Serpentina Whole Root), or with other antihypertensive drugs, such as ganglionic blocking agents.

Contraindications: none, except in complete renal shutdown.

Precautions: when Naturetin is added to an antihypertensive regimen including hydralazine, veratrum, and/or ganglionic blocking agents, immediate reduction must be made in the dosage for all preparations; the dosage for ganglionic blocking agents must be decreased by 50% to avoid a precipitous drop in blood pressure. This also applies if these hypotensive drugs are added to an established Naturetin regimen . . . in hypochloremic alkalosis with or without hypokalemia . . . in cirrhotic patients or those on digitalis therapy when reductions in serum potassium are noted . . . in diabetic patients or those predisposed to diabetes . . . when increased uric acid concentrations are noted . . . when signs—leg or abdominal cramps, pruritus, paresthesia, rash—suggestive of hypersensitivity, are noted.

Naturētin —*Dosage: in edema,* average dose, 5 mg., once daily, preferably in the morning; to initiate therapy, up to 20 mg., once daily or in divided doses; for maintenance, 2.5 to 5.0 mg., daily in a single dose. *In hypertension:* suggested initial dose, 5 to 20 mg. daily; for maintenance, 2.5 to 15 mg. daily, depending on the individual response of the patient. When Naturetin is added to an antihypertensive regimen with other agents, lower maintenance doses of each drug should be used.

Naturētin —*Supplied:* tablets of 2.5 mg. and 5 mg. (scored).

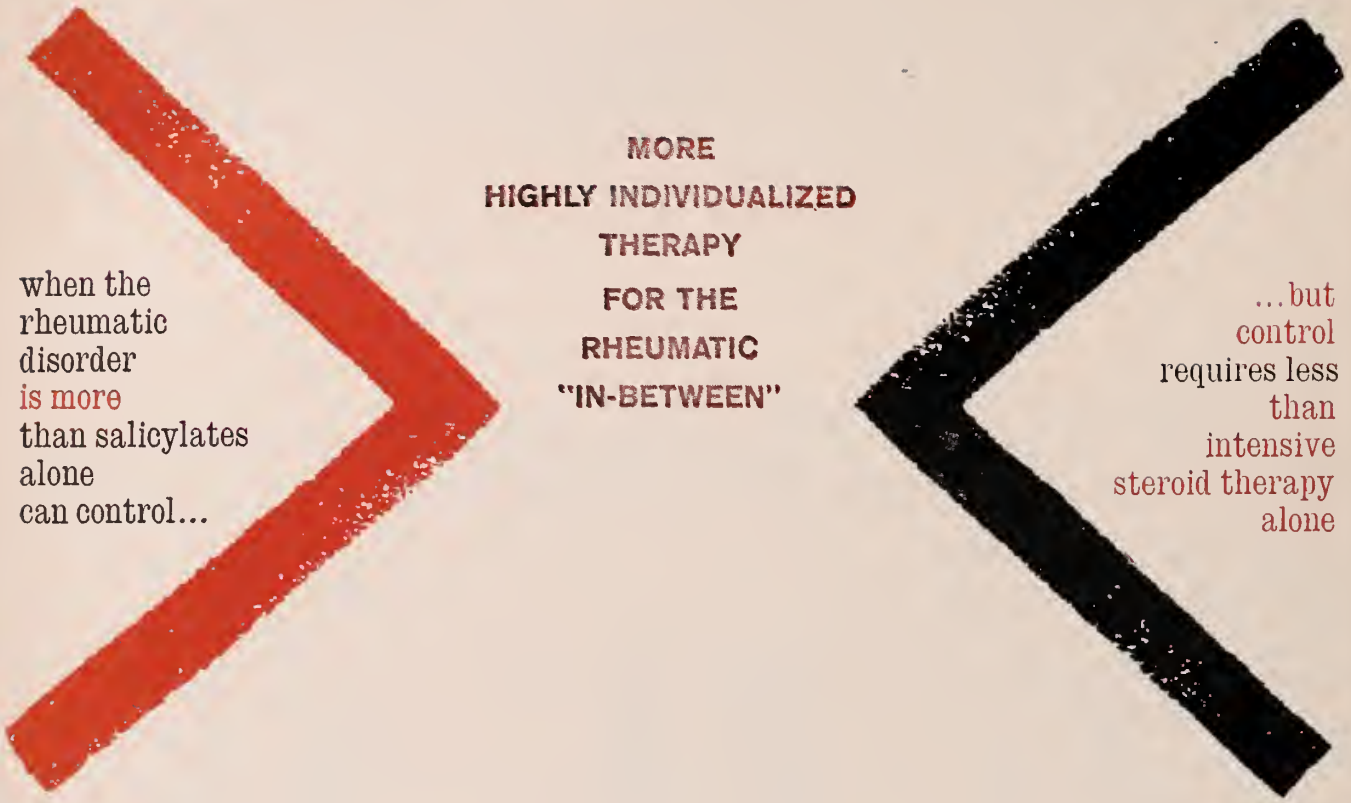
SQUIBB



Squibb Quality—
the Priceless
Ingredient

℞ Naturetin 5mg.
Disp. #30
Sig: 1 each
morning.

'RAUDIXIN'® AND 'NATURETIN' ARE SQUIBB TRADEMARKS.


MORE
HIGHLY INDIVIDUALIZED
THERAPY
FOR THE
RHEUMATIC
"IN-BETWEEN"
when the rheumatic disorder is more than salicylates alone can control...
...but control requires less than intensive steroid therapy alone

Aristo

wider latitude in adjusting dosage

ARISTOGESIC is particularly effective for relief of chronic -- but less severe -- pain of rheumatic origin. ARISTOGESIC combines the anti-inflammatory effects of ARISTOCORT® Triamcinolone with the analgesic action of salicylamide, a highly potent salicylate. Dosage requirements for ARISTOGESIC are substantially lower than generally required for each agent alone. The exceptionally wide latitude of dosage adjustment with ARISTOGESIC permits well-tolerated therapy for long periods of time with fewer side effects.

Indications: Mild cases of rheumatoid arthritis, tenosynovitis, synovitis, bursitis, mild spondylitis, myositis, fibrositis, neuritis, and certain muscular strains.

Dosage: Average initial dosage: 2 capsules 3 or 4 times daily. Maintenance dosage to be adjusted according to response.

Precautions: All precautions and contraindications traditional to corticosteroid therapy should be observed. The amount of drug used should be carefully adjusted to the lowest dosage which will suppress symptoms. Discontinuance of therapy must be carried out gradually after patients have been on steroids for prolonged periods.

Each ARISTOGESIC Capsule contains:

ARISTOCORT® Triamcinolone	0.5 mg.
Salicylamide	325 mg.
Dried Aluminum Hydroxide Gel	75 mg.
Ascorbic Acid	20 mg.

Supply: Bottles of 100 and 1,000.

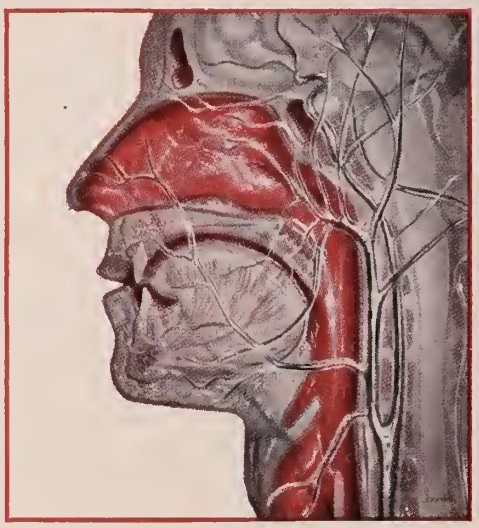
gesic® Capsules

Steroid-Analgesic Compound LEDERLE

Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

reaches all nasal and paranasal membranes *systemically*[1]



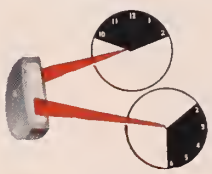
Pharmacologically balanced formula for prompt symptomatic relief

- in nasal and paranasal congestion
- in sinusitis and postnasal drip
- in allergic reactions of the upper respiratory tract

Triaminic*[2,3] *is safer and more effective than topical medication

- transported systemically to *all* respiratory membranes
- provides longer-lasting relief
- presents no problem of rebound congestion
- avoids "nose drop addiction"

Relief is prompt and prolonged because of this special timed-release action:



first — the outer layer dissolves within minutes to produce 3 to 4 hours of relief

then — the core disintegrates to give 3 to 4 *more* hours of relief

Each Triaminic timed-release Tablet provides:
Phenylpropanolamine HCl ..... 50 mg.
Pheniramine maleate ..... 25 mg.
Pyrilamine maleate ..... 25 mg.

Dosage: 1 tablet in the morning, midafternoon and at bedtime. In postnasal drip, 1 tablet at bedtime is usually sufficient.

Each timed-release Triaminic Juvelet® provides: ½ the formulation of the Triaminic Tablet.

Dosage: 1 Juvelet in the morning, midafternoon and at bedtime.

Each tsp. (5 ml.) of Triaminic Syrup provides: ¼ the formulation of the Triaminic Tablet.

Dosage (to be administered every 3 or 4 hours): *Adults* — 1 or 2 tsp.; *Children 6 to 12* — 1 tsp.; *Children 1 to 6* — ½ tsp.; *Children under 1* — ¼ tsp.

1. Fabricant, N. D.: E.E.N.T. Monthly *37*:460 (July) 1958.
2. Lhotka, F. M.: Illinois M. J.: *112*:259 (Dec.) 1957.
3. Farmer, D. F.: Clin. Med. *5*:1183 (Sept.) 1958.

the leading oral nasal decongestant...

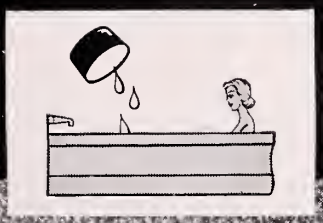
Triaminic®

timed-release tablets and juvelets
also non-alcoholic, fruit-flavored syrup

SMITH-DORSEY • a division of The Wander Company • Lincoln, Nebraska

proven successful[1] in almost every case of

skin itch and dryness



Used in the bath SARDO releases millions of microfine water-dispersible globules* to provide a soothing, softening suspension which enhances your other therapy. SARDO baths . . .

1 **rehydrate the dry, itchy, scaly skin**

2 **add comfort to the therapeutic care**

3 **act to measurably increase natural emollient skin oil**

4 **minimize loss of natural oil and excessive moisture with a fine non-occlusive film**

Patients will appreciate pleasant, convenient, easy to use, pine-scented SARDO. Non-sensitizing. Most economical. Bottles of 4, 8 and 16 oz.

1. Spoor, H. J.: N. Y. State J. Med. Oct. 15, 1958

Sardo®
in the bath

for atopic dermatitis
eczematoid dermatitis
senile pruritus
contact dermatitis
soap dermatitis



Samples and literature yours for the asking.

Sardeau, Inc. 75 East 55th Street New York 22, N. Y.

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Effective relief in rheumatic disorders

Sterazolidin® capsules

prednisone-phenylbutazone Geigy

Geigy

with less risk of disturbing hormonal balance



In the treatment of the rheumatic disorders new Sterazolidin provides a method of limiting the gravest danger inherent in steroid therapy... hypercortisonism arising from excessive dosage.

Repeatedly it has been shown that the addition of low dosage of Butazolidin sharply reduces hormone requirement.[1-4] Sterazolidin is a combination of prednisone (1.25 mg.) and Butazolidin (50 mg.) which provides, in the majority of cases, consistent relief at a stable uniform maintenance dosage significantly below the level at which serious hormonal imbalance is likely to occur.

Sterazolidin® (prednisone-phenylbutazone Geigy). Each capsule contains prednisone 1.25 mg.; phenylbutazone 50 mg.; dried aluminum hydroxide gel 100 mg.; magnesium trisilicate 150 mg. and homatropine methylbromide 1.25 mg.

1. Kuzell, W. C., and others.: Arch. Int. Med. 92:646, 1953. 2. Wolfson, W. Q.: J. Michigan M. Soc. 54:323, 1955. 3. Strandberg, B.: Brit. J. Phys. Med. 19:9, 1956. 4. Platt, W. D., Jr., and Steinberg, I. H.: New England J. Med. 256:823 (May 2) 1957.

Geigy, Ardsley, New York

03660


IN LOW BACK PAIN...
more and more
reports show that
Trancopal®
a true "tranquilaxant"
keeps the patient
on the job

THE FIRST TRUE "TRANQUILAXANT"

Trancopal®

relieves painful muscle spasm and relaxes the patient



Impressive numbers of patients with low back pain and other musculospastic conditions treated with Trancopal have been freed of symptoms and enabled to return to their usual activities, according to newly published clinical reports. In a recent study by Lichtman,[1] Trancopal brought excellent to satisfactory muscle relaxation to 817 of 879 patients. The patients in this group suffered from skeletal muscle spasm associated with low back pain (361 cases), stiff neck (128 cases), bursitis (177 cases), and other skeletal muscle disorders (213 cases). Side effects were rare (2 per cent of patients), and it was not necessary to discontinue medication in any of the patients. Lichtman comments: "Chlormethazanone [Trancopal] not only relieved painful muscle spasm, but allowed the patients to resume their normal activities with no interference in performance of either manual or intellectual tasks."[2]

When you prescribe Trancopal for musculoskeletal disorders, you can confidently expect that your patients will be relieved of the pain and stiffness. You can be sure of their speedy return to everyday work and recreation.

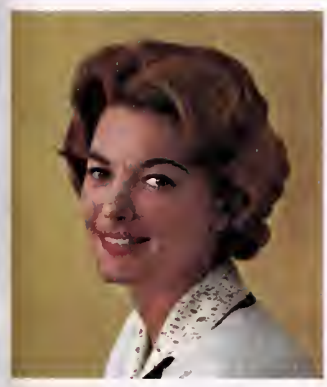
Mullin and Epifano call Trancopal "...a very effective skeletal muscle spasmolytic."[3] They found that Trancopal brought good to excellent relief to all of 39 patients with skeletal muscle spasm related to trauma, bursitis, rheumatoid arthritis, osteoarthritis, and intervertebral disc syndrome. (No side effects were noted except that one patient had slight dryness of the mouth.)

The pattern is similar in every new series reported: Ganz,[4] DeNyse,[5] Shanaphy[6] and Stough.[7]

Trancopal is a true "tranquilaxant"

Trancopal "...combines the properties of tranquilization and skeletal muscle relaxation with no concomitant change in normal consciousness."[6]

Relieves dysmenorrhea



Trancopal not only is valuable in treating patients with low back pain and other musculoskeletal disorders, but is also very effective in bringing relief from menstrual cramps and discomfort. Shanaphy suggests that Trancopal may help the patient by its combination of muscle relaxant and tranquilizing actions, and he finds that "...the continued use of chlormezanone [Trancopal] as a therapeutic agent in dysmenorrhea is advisable."[6] Trancopal was effective in 82 per cent of his series of 50 patients. In another study, which dealt with 52 adolescent girls and 23 women, Stough[7] reported that Trancopal gave complete or moderate relief in 86.4 per cent.

Alleviates tension

And, of course, Trancopal is also very useful in the treatment of patients in anxiety and tension states. As Ganz says, "...a most valuable drug for relieving tension, apprehension and various psychogenic states...allows the patient to use his energies in a more productive manner in overcoming his basic problems."[4]

Trancopal

a true "tranquilaxant"

that relieves skeletal muscle spasm
and relaxes psychogenic tension
without troublesome side effects,
and keeps the patient on the job.

Indicated for...

Musculoskeletal disorders		Psychogenic disorders
Low back pain (lumbago)	Fibrositis	Anxiety and tension states
Neck pain (torticollis)	Ankle sprain, tennis elbow	Dysmenorrhea
Bursitis		Premenstrual tension
Rheumatoid arthritis	Myositis	Asthma
Osteoarthritis	Postoperative muscle spasm	Angina pectoris
Disc syndrome		Alcoholism

Now available in two strengths:

Trancopal Caplets®, 100 mg.
(peach colored, scored), bottles of 100.

NEW STRENGTH ▶ Trancopal Caplets, 200 mg.
(green colored, scored), bottles of 100.

Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms occurs in from fifteen to thirty minutes and lasts from four to six hours.



Professional models used for photographs.

References: 1. Lichtman, A. L.: Scientific Exhibit, meeting of the International College of Surgeons, Miami Beach, Fla., Jan. 4-7, 1959. 2. Lichtman, A. L.: *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 3. Mullin, W. G., and Epifano, Leonard: *Am. Pract. & Digest Treat.* 10:1743, Oct., 1959. 4. Ganz, S. E.: *J. Indiana M. A.* 52:1134, July, 1959. 5. DeNyse, D. L.: *M. Times* 87:1512, Nov., 1959. 6. Shanaphy, J. F.: *Current Therap. Res.* 1:59, Oct., 1959. 7. Stough, A. R.: *J. Oklahoma M. A.* 52:575, Sept., 1959.

Winthrop LABORATORIES
New York 18, New York

Trancopal (brand of chlormezanone) and Caplets, trademarks reg. U. S. Pat.

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for treatment of

Peptic Ulcers

and Hyperacidity

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Glycamine

Brand of Hyamagnate

Neutralizes excess acidity
Sustains acid-base balance

Glycamine is a New Chemical Compound —not a mixture of alkalis—that re-establishes normal digestion without affecting enzymatic activity. Glycamine's CONTROLLED ACTION does not stimulate acid secretion or alkalosis.

NON-SYSTEMIC Glycamine is compatible with antispasmodics and anticholinergics.

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GLYCAMINE TABLETS AND LIQUID

Available in bottles of 100, 500 and 1000 tablets; or pints.

Low dosage provides prompt long lasting relief

- Only four pleasant tasting, chew-up tablets or four teaspoonfuls needed daily. Each dosage maintains optimum pH for 4½ hours.

Mayrand inc.

PHARMACEUTICALS **Greensboro, North Carolina**

When you want to prescribe a diet to lower serum cholesterol, is a low-fat low-cholesterol diet the best way?

No, not according to today's thinking. A more efficient way is to control the type and amount of fat in the diet.

This means to control the total calories and to replace the saturated fats wherever possible with poly-unsaturated vegetable oil.

There is a considerable agreement among heart research workers that a low-fat diet does not by itself consistently reduce beta lipoproteins and blood cholesterol or sustain a low level. Many low-fat diets merely eliminate the visible fats. The *invisible* fat, inherent in meat and dairy products, is basically *saturated fat*, so that a low-fat diet quite frequently is actually relatively high in saturated fat. Consequently, the patient does not get the proper percentage of the *poly-unsaturated fatty acids* that help to lower blood serum cholesterol and to maintain it at proper levels.

We know today that a low-cholesterol intake (dietary cholesterol) has little or no bearing on serum cholesterol. Too, that it would be most undesirable to eliminate all cholesterol-containing foods from the diet, because they carry with them so many important accessory nutrients.



When a vegetable (salad) oil is medically recommended as part of a cholesterol depressant regimen, Wesson is unsurpassed by any readily available brand.

Uniformity you can depend on. *Wesson has a poly-unsaturated content better than 50% . Only the lightest cottonseed oils of highest iodine number are selected for Wesson and no significant variations in standards are permitted in the 22 exacting specifications required before bottling.*



Wesson satisfies the most exacting appetites

To be effective, a diet must be *eaten* by the patient. The majority of housewives prefer Wesson particularly by the criteria of odor, flavor (blandness), and lightness of color. (Substantiated by sales leadership for 59 years and reconfirmed by recent tests against next leading brand with identification removed, among a national probability sample).

WESSON'S IMPORTANT INGREDIENTS:

Wesson is 100% cottonseed oil... winterized and of selected quality

Linoleic acid glycerides	**50% to 55%**
Phytosterol (predominantly beta sitosterol)	**0.4% to 0.7%**
Total tocopherols	**0.09% to 0.12%**

Never hydrogenated — completely salt free

Each pint of Wesson contains 437-524 Int. Units of Vitamin E.

FREE *Wesson recipes, available in quantity for your patients, show how to prepare meats, seafoods, vegetables, salads and desserts with poly-unsaturated vegetable oil. Write—specifying quantity needed—to The Wesson People, 210 Baronne St., New Orleans. La.*

The diet prescribed to lower cholesterol can include a breakfast egg cooked in poly-unsaturated Wesson.

make them measure up



Incremin® with iron Syrup

Lysine-Vitamins Lederle

help restore the normal blood picture—iron as ferric pyrophosphate to restore or maintain normal hemoglobin.

boost appetite and energy—vitamins . . . B_1, B_6 and B_{12}.

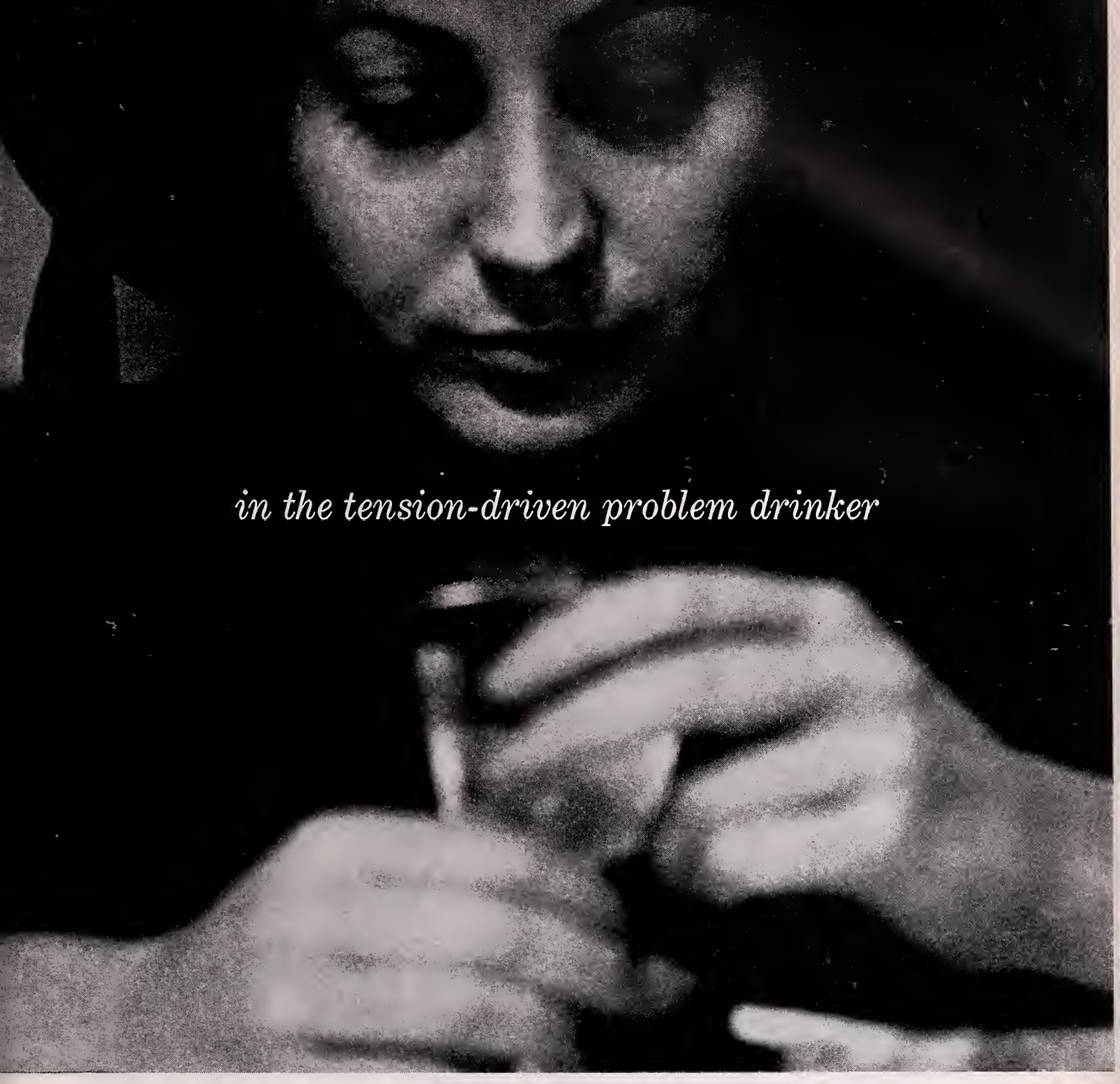
upgrade low-grade protein—cereals and other low protein favorites of children, upgraded by l-Lysine, work with meat and other top protein to build stronger bodies.

tastes good! Each daily cherry-flavored teaspoonful dose (5 cc.) contains:

l-Lysine HCl	300 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine HCl (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Sorbitol	3.5 Gm.
Alcohol	0.75%

Bottles of 4 and 16 fl. oz.

Lederle LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



Vistaril® helps bring tranquility

hydroxyzine pamoate

When she drinks to relieve her tensions, VISTARIL can help restore perspective. By maintaining tranquility, VISTARIL helps patients to accept counsel more readily, and encourages abstinence from drinking.

VISTARIL has shown a wide margin of safety, even in large doses, over prolonged periods. Clinical studies have shown that VISTARIL produces no significant lowering of blood pressure, pulse, or respiration in chronic drinkers.

Available as: *Capsules*—25, 50, and 100 mg. *Parenteral Solution (as the HCl)*—25 mg. per cc., 10 cc. vials and 2 cc. Steraject® Cartridges; 50 mg. per cc., 2 cc. ampules. Professional literature available on request from the Medical Department, Pfizer Laboratories. Brooklyn 6, New York.

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COMPOCILLIN®-VK
(POTASSIUM PENICILLIN V, ABBOTT)

OFFERS THE HIGH BLOOD LEVELS OF POTASSIUM PENICILLIN V

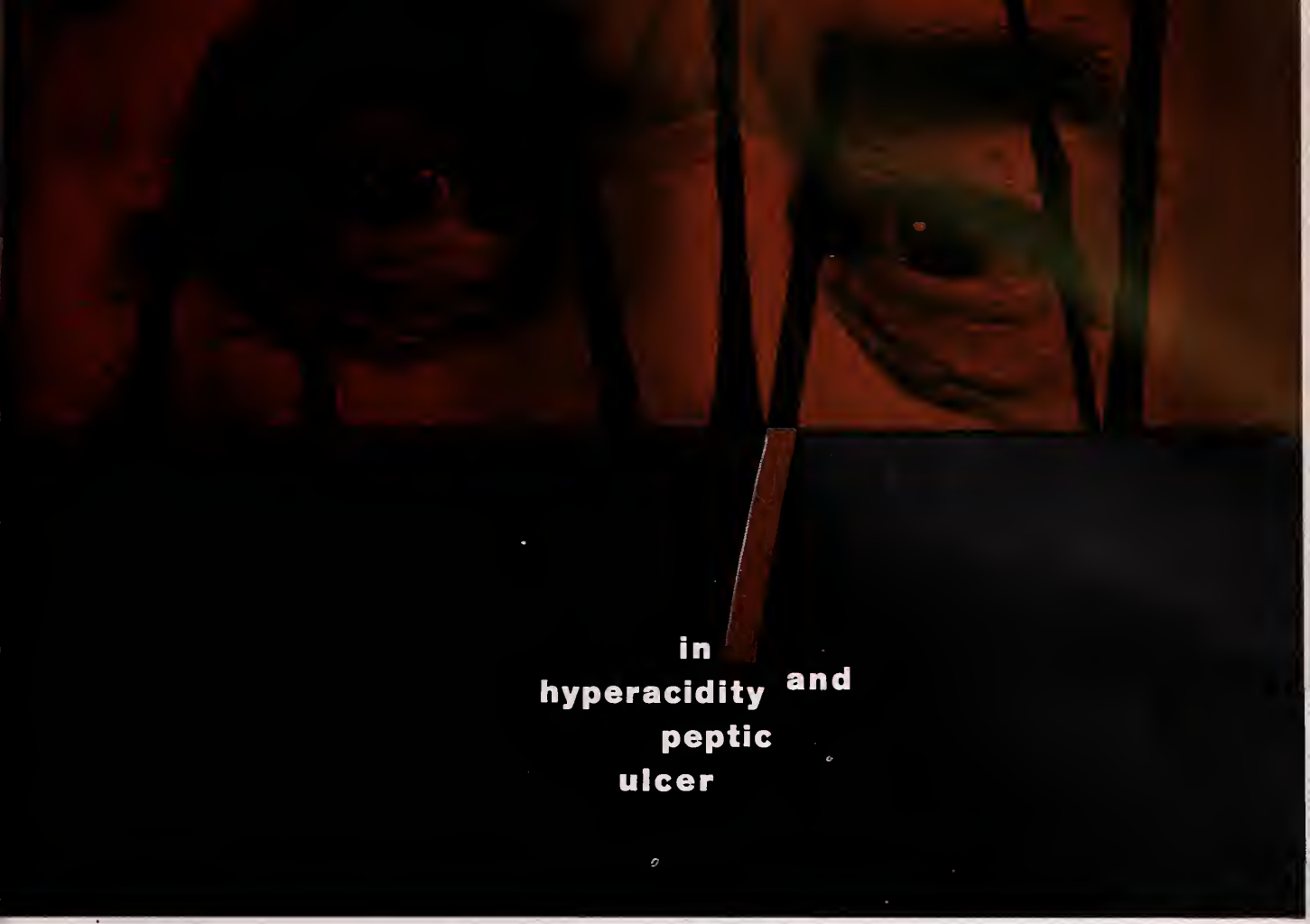


Available in tiny, easy-to-swallow Filmtabs® and in tasty, cherry-flavored Oral Solution.

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ABBOTT



as reactive in tablet form . . .

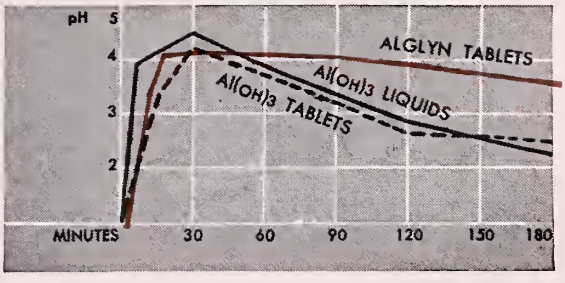
ALGLYN®

Dihydroxy aluminum aminoacetate

The superiority of Alglyn (dihydroxy aluminum aminoacetate) as an antacid over ordinary aluminum preparations is quite pronounced. Not only do Alglyn Tablets act as rapidly as aluminum hydroxide gels and magmas, but they maintain a much more effective pH for a longer time (see chart).

Furthermore, Alglyn Tablets are decidedly superior when antacid-belladonna therapy is indicated. Ordinary aluminum preparations may actually *ad*sorb as much as 80% of the spasmolytic drug, as compared to only 7% for Alglyn Tablets. In addition, Alglyn contains no sodium and less aluminum.

Supplied in bottles of 100 0.5 Gm. tablets. Also as Belglyn® (with belladonna), and as Malglyn® (with belladonna and phenobarbital). Literature available upon request.



BRAYTEN PHARMACEUTICAL COMPANY *Chattanooga 9, Tennessee*

ILOSONE® WORKS in STAPH. INFECTIONS





"In our hands it has been particularly helpful in the treatment of staphylococcic disease."[1]

In difficult staph. infections, a decisive response may be obtained with Ilosone in a high percentage of cases.

In a study[1] of 105 patients, sixty-four of whom had *Staphylococcus aureus* infections, good results were obtained with Ilosone in 94 percent. Ten subjects had previously failed to respond to other forms of chemotherapy. The authors concluded that Ilosone ". . . is useful in treatment of a number of common infections and has been effective in treatment of a number of less common and more serious infections. . . . In our hands it has been particularly helpful in the treatment of staphylococcic disease."

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1. Smith, I. M., and Soderstrom, W. H.: J. A. M. A., *170*:184 (May 9), 1959.

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Guest Editorial....

Atherosclerosis

CARDIOVASCULAR DISEASES remain the number one killer in the United States today, despite the marked reduction in mortality in cardiovascular disease due to rheumatic fever, subacute bacterial endocarditis, syphilis, other infections, thyroid dysfunction and congenital defects. The above is so because of the fact that atherosclerosis and hypertension remain the most prevalent etiological factors in morbidity and mortality in the United States today. Furthermore, there is excellent reason to believe that atherosclerosis is present in the majority of American males over 25 years of age. Recent studies again point out that it is not only the number one killer of the elderly, but also of the middle age (especially men) in the prime of life. Atherosclerosis used to be considered more or less as just one of the processes accompanying middle, or especially old, age. However, I believe that certainly the consensus of opinion today agrees with Louis Katz who states, "It is a disease. Therefore, it is not inevitable, nor is it irreversible. Rather it is preventable and (at least up to a certain point) curable."

Atherosclerosis should be classified as a metabolic disease. Furthermore, the evidence substantiates that altered cholesterol-lipid-lipoprotein metabolism plays a very important and decisive (but not exclusive) role.

Many studies, including our own, indicate that elevated levels of plasma cholesterol-lipid-lipoprotein are found in most people after middle age with evidence of atherosclerosis. It is believed that without such abnormalities significant atherosclerosis would rarely occur in middle age.

Hypertension may or may not accompany atherosclerosis; if present it is certainly an aggravating factor and probably accentuates the atherosclerosis process. However, hypertension may be present in an individual without atherosclerosis.

It is impossible to document all data in a communication such as this. However, I believe the data do substantiate the theory that altered cholesterol-lipid-lipoprotein

metabolism causes atherosclerosis and that this altered metabolism is brought about by the life span pattern of diet. It is believed that the difference in the diet of the people of the United States as compared with that of economically underdeveloped people of the world accounts for the difference in degree of cholesteremia and coronary atherosclerosis. However, we recognize that other differences must be considered, such as racial, climatic, geographic, cultural, religious, public health and medical; nevertheless, we feel that the difference in diet is the vital point. Surveys during the past two decades in Ceylon, Costa Rica, East Africa, India, Israel, South Africa and other places show that atherosclerosis is rare in people whose lifelong diet has been mainly vegetarian and low in total calories, total fats, saturated fats and cholesterol. The atherosclerosis was checked by clinical and morphological means, and was rare not only in females but also in males. This is in marked contrast to the United States where, especially in middle-aged men, atherosclerotic coronary disease can be said to be epidemic and a high percentage manifest gross lesions in the coronary arteries. Recently studies have shown that peoples in the economically underdeveloped countries, eating a lifelong low fat diet, not only have much less atherosclerotic coronary heart disease but also have a definitely lower serum cholesterol than people of the United States of America. In fact, recent epidemiologic studies from Framingham, (Massachusetts), Albany and Los Angeles suggest that the accepted normals in the United States for both weight and serum cholesterol are really too high. These data also reaffirmed the untoward effects of obesity and hypertension on coronary disease.

An enormous amount of animal-experimental laboratory work has been done on this problem of diet, cholesterol-lipid-lipoprotein metabolism and atherogenesis. Atherosclerosis has been produced in various species by feeding high lipid, high cholesterol diet at times with other things, e.g., the production of hypothyroidism in the dog. Recently coronary thrombosis and myocardial infarction have been induced in rats by use of special diet; true atherosclerosis was not produced in the coronary arteries, but there was marked lipid accumulation.

Experimentally induced atherosclerosis has been shown to undergo gradual regression when the atherogenic diet was withdrawn and substituted by a low fat, low cholesterol diet. Furthermore, there have been some studies which suggest but do not prove that humans with proven atherosclerotic coronary heart disease live longer if they stick closely to a low fat, low cholesterol diet.

There are probably other hormonal and endogenous factors which play some part in atherosclerosis. It is certainly generally accepted that middle age males have coronary atherosclerotic heart disease in far greater numbers than females, the sex ratio is at lease 4:1. Furthermore after the menopause this sex differentiation rapidly. disappears. Thus ovarian estrogenic secretion certainly protects humans against atherosclerosis and furthermore there are a great deal of experimental data showing this same phenomena in animals—also showing reversibility of the lipid and fibroplastic components of atherosclerotic lesions by treatment with estrogens. Finally, there are clinico-pathologic studies which point to the effect of estrogen secretion in atherosclerosis, such as a group of elderly males who received prolonged high dosage estrogen

treatment for prostatic carcinoma and who demonstrated significant less atherosclerosis than a matching group receiving no significant estrogen treatment; also it has been confirmed that eunuchs manifest much less atherosclerosis than normal men.

As a clinician one might ask what, if any, is the practical importance of all the above research and observations. I believe this research is of the utmost importance for from it have come at least some suggestions—even though not scientific proof—that we can use in the rational treatment of patients with atherosclerotic coronary disease, almost certainly in a prophylactic regime and perhaps to help prevent further progress of the disease or possibly to help in reversing atherosclerotic changes.

I think it is generally accepted that for people with clinical atherosclerotic coronary heart disease a diet low in saturated fat and of such caloric intake as will bring the patient's weight to a low normal is indicated. Furthermore; it seems that certain patients in which we cannot demonstrate clinical atherosclerotic heart disease, but who might be classified as high risk individuals, would do well to go on the above-mentioned diet prophylactically; this group would exhibit two or more of the following abnormalities, obesity, hypercholesteremia, hypertension, renal damage, diabetes, hypothroidism, heavy smoking and/or a poor family history.

Finally, a few words specifically about the diet. I believe these people should avoid adding large amounts of saturated fats, avoid fried foods and avoid putting butter or margarine on vegetables. Fruits are the best type of desserts and ice cream, pies and many good typically American desserts should be avoided. Obesity should be corrected and kept corrected. The diet intake of fat should be reduced from the general American intake of 40 to 60% of the total calories down to 20 to 25%, and it would seem wise to increase ratio of unsaturated to saturated fat by using vegetable oil, e.g., corn oil. A breakfast of cereal, skim milk, fruit, non-fat bread and jam instead of the usual American breakfast of bacon, fried eggs, white bread and butter would help a great deal in cutting down saturated fat intake. Louis Katz believes that such a program would reduce clinical atherosclerosis in this country to a significant extent in five years—I am inclined to agree.

PAUL D. CAMP, M.D.

Professional Building
Richmond, Virginia

The Retarded Child

What Can the Physician Do?

COURTLAND H. DAVIS, Jr., M.D.
Winston-Salem, North Carolina

The physician is the first person to whom parents turn when they suspect their child is mentally retarded. He must evaluate, treat, advise and guide. It is through proper guidance that the family and community take their places in the management of handicapped children.

IT HAS BEEN SAID that the function of the physician is:

"To cure sometimes
To relieve often
To comfort always."

The relative weight of these parts of function varies with the problem and with our time in medical history. As physicians we seek the cure, but failing this we must not withdraw from the problem, neglecting our opportunities to relieve and to comfort. At this time in history the weight of treatment in mental retardation falls into these latter two categories; the physician must perform these functions. We trust that this relative weight will not always hold; we hope that new advances in embryology, teratology, nutrition, biochemistry, virology, immunology, toxicology, genetics, basic neurology, sociology and education will lead to cure and prevention by elimination, one by one, of the many causes of mental retardation. Already some advances have been made; we must be constantly alert to take advantage of these occasional opportunities *to cure.*

I. *At this time, and possibly for all time, the only "cure" for mental retardation is prevention.*

For convenience, we can divide some of the known causes of mental retardation into three categories: (1) factors operating during the prenatal period, both enviromental and genetic; (2) injuries to the nervous system associated with the time of birth; and (3) diseases and injuries of infancy and childhood.

(1). FACTORS OPERATING DURING THE PRENATAL PERIOD

The most obvious advances in the prevention of mental retardation due to prenatal causes have been made by altering or eliminating the environmental factor of infection. Routine testing for syphilis and effective treatment of the disease have made mental retardation from congenital neurosyphilis practically a thing of the past. Recognition of maternal rubella in the first trimester of pregnancy as a cause of multiple anomalies has led to passive immunization of the exposed mother and undoubtedly to a decreased occurrence of this tragedy; it is hoped that an effective method of active immunization can be developed. We need to know what other viral infections may lead to mental retardation and how they can be counteracted. We need to know why the fetal nervous system reacts so much more violently than the more mature system. We need effective means of recognizing and treating maternal toxoplasmosis to prevent another known cause of mental retardation.

The influence of such environmental factors as physical surroundings, emotional climate, and particularly nutrition are more difficult to measure. There is a theory,[1] however, that these may be significant and alterable factors contributing to the so-called "familial or subcultural amentia."

Even more exciting are recent discoveries relating to "inborn errors of metabolism". Here are genetic disorders in which manipulation of the environment can lead to suppression of undesirable characteris-

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tics. Phenylpyruvic oligophrenia and galactosemia are already well known causes of mental retardation. Phenylketonuria, the result of an inborn error of metabolism of phenylalanine, inherited[2] as a recessive condition transmitted by a single autosomal gene, consists of a severe mental deficiency associated with the excretion of phenylpyruvic acid in the urine. By the time the infant is three months old the diagnosis can be made by adding a few drops of 5 per cent ferric chloride solution to a small amount of acidified urine. The urine turns a deep bluish-green when phenylpyruvic acid is present. The treatment is to provide a diet low in phenylalanine. The outlook is good if the diagnosis is made in infancy or early childhood. Galactosemia,[2] the result of an inborn error of metabolism of galactose, perhaps inherited as a recessive condition, by its toxic nature causes retarded growth and mental development. Suspected when the apparently normal newborn baby begins to do poorly nutritionally and jaundice and melituria develop, the diagnosis is confirmed by an elevated galactose level in the blood and an abnormal galactose tolerance test. If recognized early and treated by eliminating milk and milk-products from the diet, the outlook is good for a return to normal. Other diseases of the nervous system associated with aminoaciduria are now being recognized. Further biogenetic discoveries may well lead to revolutions in prevention and treatment of many neurologic disorders.

(2). INJURIES TO THE NERVOUS SYSTEM ASSOCIATED WITH THE TIME OF BIRTH

In the perinatal period, properly much attention has been and is being directed to maternal anesthesia and oxygenation, methods of delivery, and effective resuscitation of the newborn. More information is needed, however, about possible damage to the infant's brain because of delays or other interference with breathing in the neonatal period. The relationship between prematurity and mental retardation is recognized but not understood; nevertheless, all known measures to prevent or delay premature birth should be employed. Relatively recent discoveries that abnormalities in the composition of the blood in the neonatal period may lead to profound damage to the central nervous system have opened new highways of investigation and prevention. Recognition of Rh factor incompatability[3] as a cause of erythroblastosis fetalis and kernicterus and the development of exchange transfusions have certainly prevented many cases of cerebral palsy and mental retardation. More needs to be known about nonerythroblastic kernicterus and its modifying factors; for instance, the recent discoveries that premature infants are made more susceptible to the development of kernicterus by the injection of excessive amounts of Vitamin K[4] (when 0.5 to 1.0 mgm. of Synkayvite is sufficient to prevent postnatal hypoprothrombinemia) and by the use of certain sulfonamides.[5] Much more must be learned about other related abnormalities.

(3). DISEASES AND INJURIES OF INFANCY AND CHILDHOOD

In infancy and early childhood recognition and effective treatment of cretinism will prevent mental retardation in many instances. The alert physician, by roentgenographic examination of the head and appropriate consultation, can differentiate between microcephaly, for which there is no effective treatment, and premature closure of the cranial sutures, for which there is treatment with satisfactory cosmetic and functional results. The treatment of the complex problem of hydrocephalus certainly is not uniformly satisfactory; nevertheless, the effective salvage of many otherwise doomed children demands early investigation and indicated neurosurgical treatment.

Lead intoxication with encephalopathy is a preventable disease. Parents of small children should be educated about the dangers of lead ingestion, particularly in areas where buildings are being torn down to make way for new housing developments, where chipped paint, plaster or putty are left. The trend toward lead-free toys and interior paints must be continued. Lead encephalopathy should be considered in the differential diagnosis in children with seizures, coma, and increased intracranial pressure, and the often diagnostic simple wrist roentgenogram should be obtained.

We need earlier recognition and better treatment of acute infectious and inflammatory diseases of the central nervous system. In many instances, one gets the impression that we are now able to salvage life but not effective life.

Epilepsy, and the occasionally associated mental deterioration, needs to be better understood. We are encouraged by recent reports that a relatively rare type of epilepsy, hypsarhythmia, which has had a poor prognosis with progressive mental retardation, seems to respond favorably to steriod therapy.[6]

Better traffic safety measures and perhaps wider use of newer therapeutic tools such as hypothermia[7] are needed to avert the ever-increasing tragedy of the child who is brain-damaged by accident.

There are already more than 70 known causes of mental retardation. Through research, we need to identify, understand,[8] and prevent or alter each cause, one by one.

II. *When we cannot cure, we often can relieve.*

It is tragic that many times the physician, after what seems to the parent to be a brief, cursory examination, says, in effect: "The child is an idiot, put it away and forget about it." To the parent, his child is never "an idiot," usually there is no place to "put it away," and the parent will never "forget about it." This child is the culmination of dreams and desires, the product of a long and hopeful pregnancy, who because he has been a baby longer often has aroused more than the usual parental love and protection. In the rare case of the severely deformed child, early or immediate separation often is advisable and acceptable. The mongoloid child and the child with a lumbar myelomeningocele *do not fall* into this category! Most retarded children are not recognized as such until late in infancy and often not until school age. Frequently parents are the first to suspect retardation and call it to the attention of the physician. Parents should never be brushed off with "he'll outgrow it." On the other hand, when the physician has good reason to suspect developmental retardation, he should so inform the parents. Then should follow a thorough evaluation, including, if indicated, roentgenographic examination, appropriate consultation, and perhaps brief hospitalization for special studies. These parents must feel that everything possible has been done! They must be kept informed and should be told the truth as soon as the physician is sure of his diagnosis. If seizures are present, they should be regulated with appropriate medication. If the child is markedly hyperactive, sedation or tranquilizing drugs may be helpful.

With the exceptions already noted and with the exception of unusual problems of parental health and attitude, infants and young children should be cared for at home. There are many reasons for this.

The degree of disability in many children cannot be predicted accurately early in life. Even more important, the infant and young child begins maturing in a home with all its connotations of love, protection, and attention. The parents also mature and feel that they are doing all they can, not simply rejecting a helpless little part of themselves. Life-planning then can be carried out in an unhurried manner, best adapted to the needs of the child and the family. Properly guided by the interested and informed physician, maximum salvage for this child and this family is then brought about—too often the antithesis is incomplete development of the child's capabilities and also, for varying periods of time, loss to society of the "normal family" because of compounded grief, self-incrimination, and feelings of frustration and rejection.

You will note that I speak of "proper guidance". This is where the physician can and must offer a real and needed service.

Recently a number of interested lay groups have organized movements to protest the "nothing-can-be-done" attitudes, and they have dedicated themselves in great sincerity to the search for causes and methods of prevention, treatment and rehabilitation. Frequently, guided more by zeal than by knowledge, they have gained public support and have provided an outstanding service in alerting the public. The fractionation of handicaps by these groups, however, at times has focused a disproportionate amount of attention on one particular disease and often created a distorted impression of the degree of salvage possible in a given disease. The physician must concede that these defects in the lay programs have come about through his default of leadership and, unfortunately, through his lack of interest in or understanding of the TOTAL problem of the handicapped and their families. He should reassume his obligation of leadership, be physician to the child, counsellor with the family, and advisor to the myriad, lay, social, and professional groups devoted to the principle of maximum but *realistic* rehabilitation.

Training by the parents of the mentally retarded child in the home should be started at an early age. Publications, such as *You and Your Retarded Child*[9] and *Teach Me*,[10] should be made available. Most important is the development of discipline[11] in the child—meaning intelligent self-control. This is brought about by loving encouragement rather than by sympathy and pity. This training involves (1) focusing attention on the child and showing pleasure with his achievement; (2) making the child genuinely feel that he is a part of the family group; (3) giving the child freedom to grow—here the parents must have a realistic idea of the controls to expect at the level of the child's maturity. If punishment is used, the child must be able to understand the reason for the punishment.

As the child grows beyond infancy, nursery school activity permits him to expand his horizons and enlarge his ability to socialize, provides some physical relief for the mother, and begins the process

of acceptable separation of the child from his family.

The next logical step in home-care for the retarded child is to enroll him in special classes in the regular school system, if such classes are available and if his mental and physical capabilities permit his entrance. In our part of the country, however, more attention has been directed toward the day-care center for the handicapped child.

The purpose and policy of the day-care center has undergone sometimes a painful evolution in the past few years. The impetus from lay and professional groups has been for active rehabilitation in a limited area of interest. However, it is common for the child to have multiple handicaps. A good example is "cerebral palsy". The cerebral palsied child frequently is mentally retarded.[12] He often has speech and hearing defects and seizures. The dominant handicap may vary through the entire spectrum from the "purely physical" to the "purely mental" defect. In these children, the policy of separating the fractional elements of handicapping conditions and setting up a special agency for each organ or each physiologic defect hardly seems to be in the best interests of the whole child. In relatively small communities, the use of the facilities according to over-all need and usefulness, rather than according to subgroupings of disabilities of like nature (i.e. centers for cerebral palsied children of normal intelligence, for mentally retarded children without physical disability, for rehabilitation following poliomyelitis, for muscular dystrophy, etc.) is more economical, more stimulating to personnel, and, considering other factors such as age and personal adjustment, more valuable to the child and his family.[13]

Obviously these programs of habilitation and rehabilitation must have the active interest and guidance of the physician in cooperation with available agencies.

Knowledge of and participation in these programs broadens the physician in his needed role of *continuity of care*. With maturation of the child and the family, long-range planning is needed. This type of active planning results in maximum salvage and maximum acceptance. In many instances, particularly in rural life, the high-grade mentally retarded child with correct training and supervision can fit into self-supporting life in the community. In other cases, institutional care is indicated. These children benefit by training and sometimes will fit into an advanced work program in the institution—this represents a real economic gain. Even more important, the family now accepts the fact that this separation is better first for the child and also for the family. On the other hand, with graded training, graded separation, and complete understanding between the parents and the physician, the tragedy is averted of trying to place a middle-aged retardate whose parents are physically incapacitated or dead.

III. *Through all of this, the interested physician has performed his most helpful role—to comfort.*

The not so peculiar problems of parents of severely handicapped children have been largely overlooked in the general medical literature.[14,15,16,17,18,19] Here is an opportunity for real rehabilitation—rescuing parents from emotional exile and normal siblings from emotional and physical deprivation. These problems should be understood by the physician in approaching his goal of maximum rehabilitation.

Most of us have a sense of leading a charmed existence, permitting us to recognize, study, and treat the misfortunes of mankind without fear of personal involvement. When one is faced with the reality of a personal misfortune such as the birth of a defective child, the first reaction is to deny the deficiency; and there are "None so blind as those that will not see." Many parents invoke a protective mechanism of intellectualization and verbalization. They may run from physician to physician and clinic to clinic, hanging on to every discrepancy of diagnosis and magnifying every word of encouragement. Parents may spend money beyond their means and become victims of cultists or quacks in their hysterical search for a favorable prognosis. Unfortunately, this quest may be fostered by the feeling that the original physician has given a snap diagnosis after a brief and cursory examination.

To the parents following stubbornly fought realization comes a sense of being trapped by life itself, confusion, perhaps hysteria, and tumbling feelings of guilt, love, desire for death of the child, blame, isolation, and unconfessed shame. With loneliness and anxiety come symbolism and identification. The parents feel themselves mutilated or punished for some real or imagined failure. "What have we done to produce such a child?" Marital problems may develop with each parent blaming the other; the mother may fear her husband because he is not pleased with her child. Both parents have feelings of inferiority because the child cannot compete successfully, but they love him all the more because he is a baby longer.

Their other children may be put aside, denied their

parents' time, denied needed money for their advancement, and occasionally even resented by their parents because they are normal.

Even more pitiable is the family which, after the arrival of a defective first-born, devotes itself in martyrdom to this child and refuses to have other children. One of the earliest questions asked the physician is, "What are our chances with other children?" If the trait is a Mendelian one, the chances of repetition of the trait are one-half or one-fourth for each subsequent child. In other instances, the odds are more favorable although statistically above normal for the population. The known information[20] must be provided either by the physician or by referral to a counsellor in genetics. The final decision belongs to the parents. Where possible, normal children are one of the greatest factors in re-establishing the emotional stability of the parents.

Within a few years come problems of nonacceptance of the child by children of his own age and imagined, occasionally real, threats to the social position of the parents. Recognition of the need for further help comes with the progressive load of physical and emotional care and with the maturation of the child and parent.

The need for help and its best solution is a highly individual problem. As mentioned earlier, with hopelessly deformed children, early permanent separation from the parents is desirable and frequently acceptable. Regardless of the time of separation, the advising physician should have *personal* knowledge of the facilities available. Facilities are few. The physician who recommends institutionalization in a state school for a child who is below the age limit for admission causes unnecessary turbulence. In many larger institutions admission is not allowed until the child has reached the chronological age of six and is preferred before the age of 12. Only 21 states have institutions accepting applications from all age groups. In the other states there is a minimum age, generally varying from birth to six years, and a maximum age, generally in the young adult range.[21]

Without wise guidance, parents too often realize the need for institutional care only through bitter experience and sometimes not until the problem of care after their death must be faced. Some parents experience a catastrophic reaction, tolerating their problem to the breaking point, and then they find the situation suddenly unbearable. Others, once having accepted the idea of institutionalization, have an overwhelming desire to consummate the process immediately, exerting all the pressure at their command. Some are forced by a sense of pride to consider private schools, which they cannot afford, and refuse state schools or approach them apologetically.

As the time for admission arrives, again arise feelings of guilt over "putting the child away." The objections of grandparents may be added. The day of admission is another emotional catastrophe, and the parents may return in a day or two to demand the child's release. Seeing him for the first time among other handicapped children may be shocking.

Following this there comes a fair adjustment to the situation but emotions remain turbulent. The institution may be blamed for any illness or accident, and hostility toward the authorities may develop. Some institutions overstate their ability to rehabilitate the child, delaying parental adjustment and preparing the way for later resentment. But with adjustment a family is rehabilitated. The interested and understanding physician can point out many short-cuts through this emotional maze.

The physician[22] is the first person to whom the parents turn when they suspect their problem. He must thoroughly evaluate, treat, advise, and guide. In many localities with immature coordination of social and professional agencies and sporadic efforts of lay agencies, he should be the centrum of all efforts for evaluation and habilitation. In other areas, specialization has become so great that overall understanding and direction is required to apply benefits without confusing the child and his family.

It is through proper guidance that the family and community take their places in the management of handicapped children of all types and ages, providing understanding, acceptance, reasonable sympathy, support of local facilities (day-care centers, special education classes, clinics and hospitals, sheltered workshops) and making available good institutional care.

There are many things the physician can do for mental retardation. He can:

"Cure sometimes
Relieve often
Comfort always."

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New Antibiotic For Minor Infections

Griseofulvin is termed an effective means of treating superficial fungus infections of the skin.

Dr. C. H. McCuistion, Jr., Austin, Texas, dermatologist, writing in the December 19 issue of the Journal of the American Medical Association, said "griseofulvin is an effective antibiotic for superficial fungus infections and is safe in therapeutic doses."

Dr. McCuistion, assistant clinical professor of dermatology, Baylor University Postgraduate School of Medicine, reported on the use of griseofulvin in the control of ringworm infection of 28 children at the Austin State School for the mentally retarded and 4 private patients.

Treatment of the 29 patients suffering either ringworm of the scalp or ringworm of the body resulted in a cure in all but one case. The three patients with an infection of the finger nails and toe nails are still under treatment, and the use of griseofulvin failed to cure one patient with an infection of the feet.

"No instance of intolerance to griseofulvin requiring reduction of the dosage or cessation of administration of the drug was encountered."

Griseofulvin is a fermentation product of three species of penicillium and was isolated in 1939, the same year that the antibiotic effect of penicillin was discovered. "Penicillium, the source of griseofulvin, emerged in 1959 as a still further boon to man. Of course, unheralded and unrecognized, this lowly mold has worked for man all along."

". . . like the sulfonamides and pencillin, griseofulvin was known many years before its value to man himself was appreciated. One wonders if perhaps a cure for cancer, tuberculosis, diabetes or mental illness is not now on the chemist's shelf."

Griseofulvin

HARRY M. ROBINSON, Jr., M.D.
RAYMOND C. V. ROBINSON, M.D.
Baltimore, Maryland

This new, orally effective drug promises to be a useful agent in the treatment of superficial fungous infections.

THE ANTIFUGAL activity of griseofulvin was first demonstrated by Brian in 1946.[1] Nine years later the laboratory staff of Glaxo Laboratories demonstrated the *in vitro* activity of griseofulvin against pathogenic dermatophytes. The monumental work by Gentles in 1958[2] first paved the way for clinical studies with this drug. Later in the same year Williams, Martin and Sarkany[3] treated patients with *Trichophyton rubrum* infections of the skin and nails, and one patient with *Microsporum audouini* infection of the scalp. Blank and Roth[4] were first to use this compound in the treatment of superficial mycotic infections in the United States. Robinson and his associates[5] confirmed these previous reports and performed laboratory studies in an effort to determine the mode of action, utilization and elimination of griseofulvin.

This is an interim report elaborating on a previously reported clinical study and presenting new laboratory data.

EXPERIMENTAL STUDIES

The drug. Griseofulvin (C_{17} H_{17} O_6 Cl) is an odorless, white, thermostable substance which has some cytotoxic properties similar to those of colchicine. Although this drug is relatively insoluble in water, it is readily soluble in ethyl alcohol, ethyl acetate, butyl acetate, chloroform, ether, carbowax 300, acetone, and similar organic solvents. The original supplies of the drug were furnished in gelatin capsules but after the first few months, compressed tablets containing 250 mg. each were used. The laboratory experiments were conducted with pure powdered griseofulvin (furnished by Dr. G. Kenneth Hawkins of Schering Laboratories).

Animal selection. The dogs and guinea pigs used in these experiments were screened to rule out the presence of other cutaneous lesions. Careful attention was paid to housing and the diet. In all experimental procedures control animals were infected, cultured, and biopsied at the time animals under treatment were studied by these procedures.

Spectrophotometric studies. The spectrophotometric assay of fermentation samples was originally conducted by Ashton and Brown.[6] Their technique was modified in these experiments for the purpose of determining the presence of griseofulvin in biological fluids. Redistilled butyl acetate was used as an extractant. In order to determine the absorption maximum of griseofulvin, standard solutions containing 5, 10, 15, 20 and 25 mcg. per ml. of pure griseofulvin were dissolved in butyl acetate and using a Beckman model DU spectrophotometer, the absorption spectra of these solutions between 280 and 300 millimicrons were measured. The results located the absorption maximum at 289 millimicrons.

Errors in spectrophotometry. In earlier experiments it was determined that the xanthines, caffeine and theophylline were found to have optical absorption properties approximating the griseofulvin absorption maximum at 289 millimicrons. Therefore it was considered important to assess the possible influence of the ingestion of xanthine containing beverages on griseofulvin determinations. In this experiment a normal adult male who had not ingested griseofulvin was used as the subject. A reading was determined on a fasting blood specimen. Following this the patient was given 3 cups of strong tea and 300 mg. of citrated caffeine. Two hours later, the blood withdrawn for study and subjected to spectrophotometric analysis, gave a plasma reading corresponding to 3 mcg. per ml. measured as griseofulvin.

During the course of these experiments it was noted that the action of butyl acetate on rubber stoppers extracted a substance which had an absorption maximum approaching that of griseofulvin;

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therefore, it was necessary to use glass stoppered tubes in all experiments.

Efficency of butyl acetate as an extractant. A known quantity of griseofulvin was mixed with oxalated whole blood obtained from a dog by venipuncture. A proportion of 1 ml. of blood to 5 ml. of butyl acetate was thoroughly agitated, centrifuged, and examined spectrophotometrically. It proved possible to recover the exact amount of griseofulvin from the blood previously mixed with it by this method of extraction. In all future experiments the ratio 1 ml. of blood or urine was mixed with 5 ml. of butyl acetate for the purpose of extraction.

Blood concentration of griseofulvin following intravenous injection. An intravenous injection of 100 mg. of griseofulvin dissolved in 5 ml. of poly ethylene glycol 300 and further diluted with 2 ml. of normal saline solution was injected intravenously into a male dog weighing 12 Kg. Ten minutes later blood was withdrawn, extracted with butyl acetate, and examined spectrophotometrically. No griseofulvin was recovered. The reading was the same as that obtained with the control specimen.

Absorption and excretion of griseofulvin in man. Several patients in whom drug administration and collection of specimens could be accurately controlled were used as subjects for the study. The ingestion of coffee or tea was definitely forbidden for 24 hours prior to the experiment. The results in all instances were uniform. Baseline blood and urine studies were performed prior to the administration of the drug. Patients in this study received a daily dose of one gram of griseofulvin in divided doses. On successive days the blood concentrations of griseofulvin were read spectrophotometrically as 0.5 mcg. per ml. of plasma, 0.5 mcg. per ml. of plasma, and 0.4 mcg. per ml. of plasma. In urine the concentration in 24 hour specimens varied between 1.25 mcg. per ml. and 2.36 mcg. per ml.

CLINICAL STUDIES

The patients included in this study were treated in the out-patient department of the University of Maryland Hospital and in the authors' private practices. In previous studies the senior members of the division of dermatology contributed case material. The clinical entities treated included tinea capitis, tinea corporis, tinea cruris, onychomycosis, and tinea pedis. In each instance the diagnosis was established by direct microscopic examination of scrapings, scales, hair, or vesicle tops stained with Cohen's ink-KOH stain. Cultures were made on Sabouraud's medium to determine the causative organism.

Treatment of tinea capitis with griseofulvin by oral administration. Eighty-one children with *Microsporum audouini* infections of the scalp, and fifteen children with *Microsporum canis* infections of the scalp were treated with griseofulvin. The average daily dose was approximately 25 mg. per Kg. of body weight. In all instances improvement was noted within three weeks and at the end of five weeks there was complete involution of lesions. Four children with *Microsporum audouini* infections of the scalp developed reinfection from one to three months after therapy had been discontinued. These patients responded to a second course of griseofulvin. It was possible to obtain a positive culture from each case until new hair growth was complete. The results obtained in this study indicated that it was essential to shave or clip the hair regularly once or twice each week during the course of therapy. Recently single massive doses of griseofulvin have been administered to patients with tinea capitis and this project is still under investigation. Twelve patients have been treated in this manner with eleven successful results and one failure after five weeks of treatment. The five smaller children were given a single dose of 3 gm. of griseofulvin, and the six larger children were given a single dose of 4 gm. of griseofulvin.

Treatment of tinea cruris with griseofulvin. Fifty-five patients with tinea cruris were treated with griseofulvin by oral administration. Duration of disease varied from six months to 30 years. Forty-two patients had *Trichophyton rubrum* infections, nine patients had *Trichophyton mentagrophytes* infections and four patients had *Epidermophyton floccosum* infections. In each instance the patient received a total daily dose of 1 gm. of griseofulvin in four equal divided doses. Itching was relieved in from 24 to 48 hours in each case. Involution of lesions was complete in from four to five weeks in all instances. Recurrence of lesions occurred in three patients two to four months after treatment was discontinued. The lesions involuted following a second course of griseofulvin therapy. Involution time and relief of symptoms was the same in all instances regardless of the duration of the disease.

Treatment of tinea pedis with griseofulvin. Forty-six patients with tinea pedis were treated with griseofulvin by oral administration. In thirty-one cases *Trichophyton rubrum* was the offending organism, six patients had *Trichophyton mentagrophytes* infections, and nine patients had *Epidermophyton floccosum* infections. Interdigital masceration persisted, however all other lesions resolved in from

eight to ten weeks following initiation of treatment. As in tinea cruris, the relief from itching occurred within 24 to 48 hours after the institution of griseofulvin therapy.

Treatment of tinea corporis by the oral administration of griseofulvin. Forty-nine patients with tinea corporis were treated with griseofulvin. The duration of the disease varied from two to thirty years. *Trichophyton rubrum* was responsible for the eruption in 43 patients and *Trichophyton mentagrophytes* was the causative organism in the remaining six. The patients received a total daily dose of 1 gm. of griseofulvin in divided doses. Itching was relieved within 48 hours after the institution of treatment and involution of lesions was complete in from five to six weeks.

Onychomycosis treated by the oral administration of griseofulvin. Thirty-five patients with onychomycosis involving toenails or fingernails were treated with griseofulvin. In thirty patients *Trichophyton rubrum* was the offending organism and in the remaining five the eruption was caused by *Trichophyton mentagrophytes.* Each patient received one gm. of griseofulvin per day in four equal divided doses. The duration of the disease had no effect on the result of therapy. No fingernail growth was noted in from three to five weeks and nail growth was complete in the majority of instances at the end of six months. It was possible to obtain positive cultures from the free end of the nails until new growth was complete. Toenails grow more slowly and patients who were started on treatment 10-12 months ago are still taking the drug. Although many of these patients have shown startling improvement, it has not proved possible to discharge as cured a single person with toe nail infection.

Toxicity studies. Hemograms, urinalyses, liver function studies, and clinical observations performed before, during and after the treatment course did not reveal any abnormalities. Several patients complained of mild diarrhea but in no instance was it severe enough to discontinue treatment. Severe headache was noted in five patients. It was not necessary to discontinue treatment because of this. Five patients with a history of penicillin sensitivity failed to develop an adverse reaction when treated with griseofulvin. This indicates that there is apparently no cross sensitization.

COMMENT

The advent of griseofulvin has marked a great advance in antibiotic therapy. Great strides have been made in learning much of the pharmacologic activity of this antifungal antibiotic but as yet the method by which it produces improvement remains obscure. Recent studies indicate that a high blood level is not necessary to obtain a good clinical result. Early investigations have shown that administration of this drug by mouth does not result in impressive blood levels when considered in relation to the quantity given. It is possible that a metabolite rather than griseofulvin itself may be the substance responsible for clinical improvement. Some *in vivo* chemical or physical mechanism may bring about a transformation of griseofulvin to such a form that it cannot be determined as the spectrophotometric method employed. Future studies with spectrophotofluorometry may give the desired answer to the problem.

The studies performed by Robinson and his associates[5] confirm the original observation made by Gentles.[2] It has proved possible to eradicate *Microsporum canis* infections from guinea pigs in seven days using a total daily dose of 25 mg. per Kg. of griseofulvin.

In the guinea pig, *Microsporum canis* infection proved to be predominantly follicular, whereas in the dog, hyphae may be observed in the stratum corneum by using the Hotchkiss-McManus stain. In serial biopsies (taken every two days), it is possible to observe the gradual disappearance of hyphae from the stratum corneum. These studies confirm Gentles contention that this antifungal antibiotic has an affinity for keratin and they also reaffirm the fact that this drug is fungistatic but not fungicidal.

In vitro studies indicated that butyl acetate is an efficient extractant for griseofulvin. In humans or experimental animals who have been receiving griseofulvin for a prolonged period, it is apparent that a small quantity is present in the circulating blood and a relatively small quantity is eliminated in the urine over a 24 hour period. It has proved possible by using this method of extraction to demonstrate the presence of a trace of griseofulvin in the skin of treated animals.

The results obtained in the treatment of patients with tinea capitis using griseofulvin indicate that this is a superior method of treatment and remarkably efficient. Stress must be laid on the fact that the diagnosis should be established by microscopic examination before treatment is instituted and if possible confirmed by culture. The criterion for cure must be a negative culture.

In the treatment of onychomycosis the drug must be administered until new nail growth is complete. If the drug is discontinued too soon, the lesions and the deformity will recur.

In the treatment of tinea corporis or tinea cruris the administration of griseofulvin must be continued until all clinical lesions have disappeared and cultures are negative.

Toxicity studies performed during the course of this investigation indicate that this is a relatively non-toxic compound.

CONCLUSIONS

1. Griseofulvin is an antifungal antibiotic which is effective on oral administration in the treatment of superficial fungus infections due to *Microsporum audouini, Microsporum canis, Trichophyton rubrum, Trichophyton mentagrophytes, Epidermophyton floccosum* and *Trichophyton tonsurans.*
2. Before the institution of treatment with griseofulvin the diagnosis must be established by direct microscopic examination and culture.
3. Clinical and experimental studies indicate that griseofulvin is fungistatic rather than fungicidal.
4. In the treatment of children, an average daily dose of 25 mg. per Kg. of body weight is adequate.
5. In the treatment of adults an average daily dose of 1 gm. of griseofulvin in four equal divided doses is adequate.
6. Single massive doses of from 3 to 5 gm. of griseofulvin have proved adequate in the treatment of tinea capitis in 11 out of 12 patients.
7. It is not necessary to have a high blood level of griseofulvin to obtain a good result.

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Rheumatic Fever

Acute tonsillitis and other streptococcal infections play a major role in the onset of rheumatic fever, according to *Patterns of Disease,* a Parke, Davis and Company publication for the medical profession.

In one study quoted by *Patterns* of 563 servicemen with rheumatic fever, 85% had previous illness. Of these two-thirds were "highly suggestive of streptococcal etiology" just before the onset of the disease.

The report also points out that rheumatic fever appears to run in families. "If 1 child has rheumatic fever the probability of his siblings developing the disease is 1 in 4; if 1 parent also has the disease, probability may increase to 1 in 2."

Stapes Surgery

Past, Present and Future

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The historical development of stapes surgery is discussed. The present techniques are described and future aims and ambitions include prevention and relief.

I WOULD LIKE to review stapes surgery, its history, its development and its status today.

The stapes or the stirrup bone, the third and smallest member of the tympanic ossicular chain, has an average height of 3-1/4 mms. and an average weight of 2-3/4 mgms. The footplate of the stirrup fills the oval window niche and, as such, connects the middle ear to the inner ear or cochlea. The stapes transmits sound vibrations from the drum, malleus and incus to the inner ear fluids. A free hinge-like motion of the stapes is necessary for normal hearing which may be impeded by middle ear disease such as otosclerosis and other diseases and conditions, both acute and chronic.

There are three symptoms referable to the inner ear. They are deafness, tinnitus and vertigo. Surgical procedures directed to the stapes are performed for the relief of one, two or all three of these symptoms. For example, for the relief of otosclerotic deafness, for the roaring tinnitus which so often accompanies conduction type hearing losses, for the reconstruction of a functioning ossicular chain in chronic otitis media and for the extraction of the stapes to secure relief of tinnitus and vertigo in advanced Meniere's disease.

HISTORICAL DEVELOPMENT

The historical development of stapes surgery can be divided into three distinct periods.

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Period Number One. From 1875 to 1900. A period of extreme activity and also one of trial and error.

Period Number Two. From 1900 to 1952. A period of extreme inactivity with reference to the stapes bone but it did include the fenestration era beginning in 1928.

Period Number Three. Began in 1952 with Dr. Samuel Rosen's[1] report on palpation of the stapes and no doubt will continue indefinitely.

The otologists' attack on the middle ear and its contents for the relief of deafness apparently began about 1875. Many operations and many reports followed during the next twenty-five years. The procedures performed included myringotomy, total or partial removal of the tympanic membrane, divisions of middle ear adhesions, divisions of the tendons of the stapedius and tensor tympani muscles, removal of one or all of the ossicles and mobilization of the stapes.

Kessel[2] in 1876 employed removal of the tympanic membrane, the malleus and the incus as a remedy for deafness, vertigo and tinnitus in non-suppurative disease of the middle ear. He later directly attacked the oval window and stapes and performed circumcision of the stapes with reported improvement in hearing. Michel[2] in 1876 exerted direct pressure on the stapes with improvement in hearing and in 1888 this maneuver was attempted by Boucheron[2] and Miot[2]. Urbantschitsch[2] described mobilization by circumcision of the footplate in his thesis "Disorders of the Ear".

From 1880 to 1890 Schwartze, Gelle, Boucheron, Moore and others practiced middle ear procedures designed to free the ankylosed footplate. Boucheron hailed mobilization of the stapes as "our operation of the future". In 1890 Miot reported a thorough study of two hundred cases and described the mobilization attempts by incudostapedial pressure with a spatula-shaped instrument.

From 1890 to 1894 Blake,[3] Jack,[4] Dench,[5] and Burnett in the United States wrote extensively on stapedectomy and related procedures. They fre-

quently mentioned mobilization but apparently had discarded this less radical approach for stapedectomy. Dench[5] in 1894 advised the cautious use of a small guarded drill for perforation of the stapes footplate. Alderton[6] in 1898 reported a case of trephining of the stapedial footplate for otitis media sclerosa. Lucae[7] in 1900 gave a detailed description of a technique of applying passive motion to the ossicular chain by means of a pressure sound with improvement in hearing.

During the last five years of the 19th Century there appeared numerous reports of suppuration involving the mastoid and middle ear complicating these procedures. At the same time many of the men who had written favorably about their results in treating deafness began to abandon these operations. Politzer[8] in 1899 stated that simple mobilization of the stapes had only a temporary effect on the hearing. Siebermann[9] in 1900 stated: "All endeavors at mobilization of the stapes are not only useless but often harmful." Holinger[10] in 1900 stated: "Ankylosis of the stirrup is comparatively frequent and leaves the patient utterly hopeless." These many adverse opinions apparently wrote finis to the stapes and mobilization procedures at that time.

The second period began about 1900 and ended in 1952 with Rosen's[1] report of palpation of the stapes for fixation. Apparently little attention was paid to the middle ear with regard to the treatment of deafness from 1900 to 1920 until Holmgren[11] reported the use of magnifying loupes and a Zeiss binocular microscope in his operative technique for the fenestration operation. In 1921 Kerrison[12] described mobilization of the stapes in his textbook "Diseases of the Ear" and stated: "The results of this procedure have not given it a permanent place in ear therapy."

From these many condemnations expressed during the latter part of the 19th Century and the early part of the 20th Century it would certainly seem that failure to gain hearing was the primary reason for abandoning the middle ear techniques. Undoubtedly infections secondary to this surgery played a major discouraging role.

Sourdille[13] in 1928 and Lempert[14] in 1938 developed a very successful fenestration technique. Thus the middle ear stapes footplate and oval window procedures for the relief of deafness were temporarily forgotten. Lempert[15] in 1946 described a technique of exposing the middle ear contents by an external canal incision and elevation of the tympanic membrane. This route of exploration of the middle ear was to lead to the re-birth of the attacks on the ankylosed footplate.

The third period, the present one, began with Rosen's[1] report on palpation of the stapes for fixation in 1952. In this report he noted that one stapes was partially fixed and suddenly became mobile with resultant hearing improvement. Rosen stated: "Manipulation of the partially fixed stapes could result in further mobility of the footplate with improved hearing." In 1953 Rosen[16] described his technique in detail reporting five successful cases and commenting: "Mobilizing the partially or completely fixed footplate of the stapes is followed by return of hearing." In 1955 Rosen[17] reported fourteen successful cases. Later in 1955 Meurman and Meurman[18] in Sweden reported the use of the Zeiss binocular microscope at magnifications of times six, times ten and times sixteen. By this time the otologists of this country and elsewhere had awakened to the possibilities and the otological literature became filled with reports of results and techniques. The names of Farrior, Fowler, Goodhill, House, Shambaugh, Shea, Schucknecht and others in this country, Heermann in Germany and Portmann in France deserve mention for the many advancements of stapes surgery for the deaf. At about this time Wullstein and Zollner in Germany were reporting favorable results with techniques of tympanoplasty in the reconstruction of middle ears damaged by chronic suppurative disease.

Today we have many advantages over the ear doctors of even ten years ago. First, we have a better understanding of the basic physiological principles involved in the conduction of sound from the drum to the inner ear fluids. Two, we have the remarkable binocular operating microscope with its built in illuminating system, its long focal distance for easy working room and its different steps of magnification from six to forty. Three, we have an array of fine instruments even to the point where two instrument companies in this country furnish separate catalogues of stapes instruments. Four, we have the aseptic techniques and the antibiotics to combat the destructive infections. And, five, probably our greatest asset is the intense interest and ambition to find the perfect or near perfect procedure to restore the hearing to the patient with otosclerosis.

The modern evolution of the surgical techniques directed to the fixed stapes footplate has paralleled closely the techniques tried from 1875 to 1900. In 1952 Dr. Samuel Rosen applied pressure to the stapes neck. Others tried pressure applied through

the incus or the head of the stapes. Next the footplate was attacked directly with needle picks. Dr. Rosen[19] advocated a tiny fenestra in the footplate. Dr. Edmund Fowler, Jr.,[20] described the anterior cruotomy technique of fracturing the footplate and the anterior crus to bypass the usual case of anterior otosclerosis. Chisels were used by Heermann[21] in Germany for freeing the footplate.

It has become evident that the fixed footplate could be mobilized in a high percentage of the cases with dramatic hearing improvement. However, in all too many cases this hearing gain was lost by re-fixation of the diseased stapes.

PRESENT TRENDS

The trends in stapes surgery for otosclerosis at the present time consist of techniques of re-positioning of the crura over a non-diseased area of the footplate, of replacement of the crura by metal or plastic prostheses again over the area of non-diseased footplate or the replacement of the footplate by the vein graft and a plastic strut as advocated by Shea. This latter procedure, first described by Shea[22] in this country and Portmann[23] in France, consists of the total removal of the diseased footplate and the stapes. A section of the vein is removed from the dorsum of the hand. This vein is thinned, opened and inserted over the oval window niche. A section of plastic tubing is then connected between the lenticular knob of the incus and the vein graft, thus re-building the sound conducting system and again transmitting sound waves to the inner ear fluids. This replacement technique, whereas it is complicated and far more difficult than the previously practised stapes procedures, seems to offer a degree of permanency in the hearing improvement in certain cases.

Today the ear doctor employs a whole battery of surgical procedures about the tiny stapes that were practically unknown eight years ago. Among these procedures are: Number One—the procedures for the restoration of hearing through its physiological route, that is, through the ossicular chain and the oval window which seem to offer many advantages over the fenestration operation, Number Two—the procedures of tympanoplasty in which the sound conducting mechanism is re-built along with the obliteration of the suppurative disease in otitis media and mastoiditis and Number Three—the destructive procedures about the stapes and oval window designed to destroy the diseased cochlea and vestibular system in advanced Meniere's disease.

FUTURE AIMS AND AMBITIONS

Through my error the program summary of this paper stated that I would inform you as to the advances in stapes surgery expected during the last twenty-five years of the 20th Century. I had no intention of attempting to predict the future. However, the future aims and ambitions of the otologists do seem quite clear. Considering the present rapid steps it would certainly seem that we should soon have reliable operations for otosclerotic deafness. Should we find the cause for otosclerosis it is even possible that it could be prevented. Next, there would seem to be less and less reason for our patients to suffer the damaging results of chronic suppurative disease to the middle ear and mastoid and, therefore, reducing the needs for the tympanoplastic procedures. Next, it is hoped that the cause and cure for Meniere's disease will also be found so that the destructive procedures employed today on the cochlea will not be necessary. Finally, we are all aware of the need for information in the field of prevention and treatment of perceptive or nerve deafness, our next challenge for the relief of those condemned to a silent world.

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Emergency Tranfusions

A simplified method of giving blood transfusions in certain emergency cases has been disclosed by two Chicago doctors. Writing in the January 2 issue of the Journal of the American Medical Association, Drs. John R. Tobin, Jr., and Irving A. Friedman described a new way to process transfusions which must be enriched with platelets, a blood component involved in coagulation. Such transfusions are used in emergencies to control bleeding and clotting.

". . . the usual methods for the preparation of platelet concentrates, platelet-rich plasma, or platelet-enriched whole blood incorporate techniques which are not available to the usual hospital blood bank, i.e., low-temperature processing, special anticoagulants, and the immediate availability of compatible blood donors." "The inference that these latter techniques are essential . . . has deprived many hospitals of a valuable therapeutic tool."

"It is our contention that platelet transfusion . . . can be made readily available if the 'bank blood' . . . is used."

The doctors studied 13 patients given processed whole blood from normal donors, compatible with the recipient and in storage less than 48 hours. They reported that bleeding "was dramatically controlled in five, partially controlled in five, and poorly controlled in three patients."

The doctors concluded that human platelets can be prepared for transfusion "without special procedures or immediately available compatible blood donors" and this should make such transfusions possible in most hospitals.

Dr. Tobin is associated with the departments of medical education and hematology of the Hektoen Institute for Medical Research of the Cook County Hospital and the departments of Medicine of the Stritch School of Medicine, Loyola University. Dr. Friedman is associated with the Chicago Medical School.

Hazards of Adrenocortical Therapy

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The development of the various adrenal drugs is described and their characteristics and uses discussed. The dangers of the use of these compounds are emphasized. Case histories are reviewed.

SINCE THE DEMONSTRATION by Hench and co-workers in 1949 of the efficacy of adrenocorticotrophin and adrenal steroids in the treatment of rheumatoid arthritis, there has been marked clinical and research interest in this group of chemicals. Intensive study of the adrenal steroids was begun in 1934, isolation and identification of various of the active hormones secreted by the cortex was undertaken, and in 1950 synthesis of cortisone and subsequently of hydrocortisone was accomplished. It was then found that if the structure was altered by introducing new atoms or radicals, its pharmacologic activity could be altered. This led to the development of many new compounds, each attempting to emphasize the beneficial and to minimize the deleterious effects of the adrenal steroids; and to the growth of a multi-million dollar drug line.

The physiologic effects of endogenous adrenal corticosteroids fall broadly into three categories: glucocorticoid, i.e. anti-inflammatory, gluconeogenesis, increased gastric activity, and pituitary suppression, the prototype of which is hydrocortisone; mineralococorticoid, i.e. anti-inflammatory, gluconeogenesis, potassium, the prototype of which is aldosterone; and androgenic.

The clinical effects of exogenous administration of adrenal corticosteroids may be divided arbitrarily into four divisions: anti-inflammatory, i.e. suppression of inflammation and toxicity, lysis of lymph tissue and eosinophils, suppression of antibody formation, and inhibition of migration of leucocytes into tissues; carbohydrate, i.e. gluconeogenesis and negative nitrogen balance; gastrointestinal, i.e. increased gastric activity and urinary uropepsinogen; and electrolyte, i.e. sodium retention, potassium excretion, expanded blood volume, and elevation of blood pressure. The first three represent the glucocorticoid activity primarily and are associated with suppression of the pituitary, for the pituitary-adrenal axis is dependent upon a "feed-back" system with increases in glucocorticoid levels inhibiting the production of corticotrophin (ACTH) by the pituitary.

From an analysis of the physiologic and normal metabolic responses to adrenal steroids, it is obvious that the so-called complications of adrenal steroid therapy are in fact only an extension of the effects which one can expect if a hypercorticoid state is induced and maintained for any length of time. Thus, the anti-inflammatory effects lead to impairment of the immune mechanism and of the ability to resist infections so that such patients are prone to the lighting up of dormant infections, especially tuberculosis, or susceptibility to infection by organisms of low virulence. The effect on carbohydrate metabolism fosters the development of diabetes. The increased protein catabolism leads to muscle wasting, weakness, osteoporosis, and is a factor in the skin changes, striae, and ecchymoses. There is a redistribution of fat tissue with the production of the typical "Cushing's" appearance, i.e. moon facies, buffalo hump and trunk obesity. Increased sodium retention may cause edema, hypertension and heart failure. Potassium loss results in weakness, and hypokalemic, hypochloremic alkalosis.

When these steroids are used as specific replacement therapy for hypoadrenalism, whether absolute or relative, the full range of steroid activity may be required, particularly the glucocorticoid (stress factor) and mineralocorticoid (salt retaining factor), albeit in varying doses and varying relative requirements of each in any specific patient.

The usual use for these steroids in clinical medicine is for their non-specific effect in a great variety

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of diseases, and the anti-inflammatory effect ordinarily constitutes the sole desired pharmacologic activity. While this alone can lead to unfortunate developments, the other metabolic alterations serve no useful purpose and frequently are frankly undesirable. With the purpose, then, of obtaining compounds that would produce the most beneficial and least harmful results, the basic hormones have been modified, evaluated and modified again as this goal was pursued.

It was found in 1955 that the introduction of a double bond between carbon atoms one and two of the basic steroid nucleus enhances the glucocorticoid activity without increasing the electrolyte effects. These are prednisone, derived from cortisone, and prednisolone derived from hydrocortisone, marketed under the trade-names Deltra, Deltasone and Meticorten, and Delta Cortef, Hydeltra, and Meticortelone. They are about five times as potent as cortisone and hydrocortisone and have much less sodium retaining effect milligram for milligram. Their relation to each other is shown in figure 1.

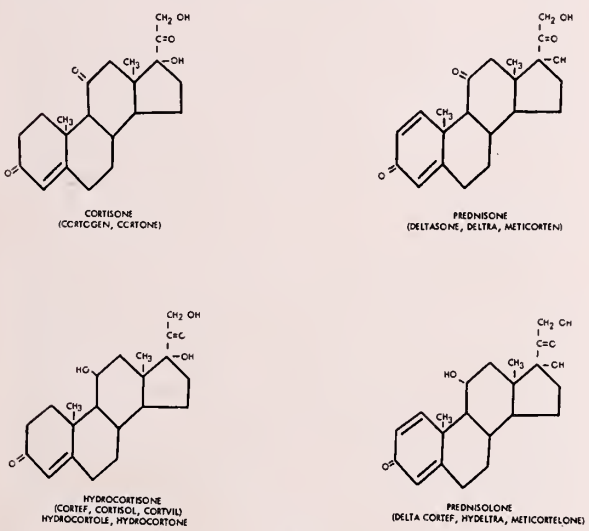


Fig. 1

6-methyl-prednisolone is produced by adding a methyl radical at the 6 carbon site of the prednisolone molecule, has the same activity as prednisolone, is slightly more potent, and was developed in the hope that this modification would have fewer undesirable actions including less ulcerogenicity. While there may be a lesser stimulation of uropepsinogen than is aroused by prednisone, peptic ulcerations do occur. The trade-name is Medrol.

If a halogen atom, fluorine, is added to the hydrocortisone configuration, the potency is increased about twenty-five times, but the salt-retaining potassium-depleting properties are increased in proportion to the other properties, so it is usually used only when there is specific adrenal cortical insufficiency and the mineralocorticoid effect is required. This is fludrocortisone, trade-named as Alflorene, F-Cortef and Florinef.

When a hydroxy radical is inserted at the 16 carbon position of the 9 alpha fluorine prednisolone molecule, the sodium-retaining qualities of fludrocortisone are strikingly modified so that there is actually a sodium loss making it the steroid of choice if there is sodium retention. It produces a significant negative nitrogen balance, however, and frequently depresses appetite so that there may be weight loss. It is slightly more potent than prednisone. This is triamcinolone, marketed as Aristocort and Kenacort.

The latest modification is substitution of a methyl radical for the hydroxy radical of triamcinolone. The resulting compound is dexamethasone and has the trade-names of Decadron and Deronil. This is about six times as potent as prednisone. It was developed in an endeavor to decrease the diabetogenic effect of the steroids, and there is some suggestion that this drug is less diabetogenic than the other compounds. The relation of these compounds to one another is shown in figure 2.

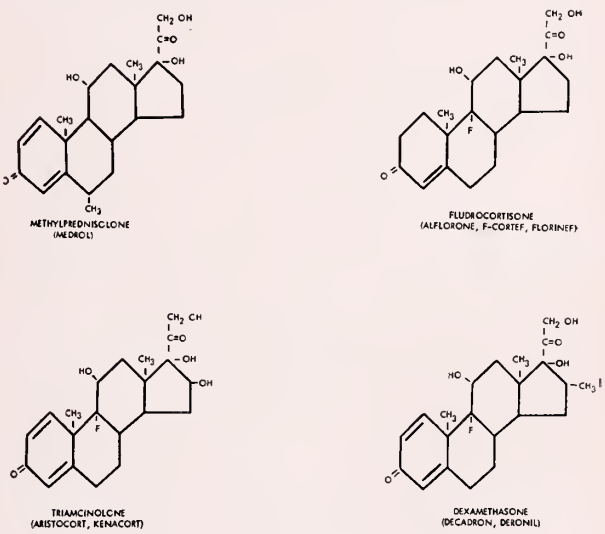


Fig. 2

Thus, with various modifications of prednisone-prednisolone, the original modification of cortisone-hydrocortisone which enhanced the glucocorticoid effect without a corresponding increase in the salt-retaining effect, triamcinolone, methylprednisolone, and dexamethasone have been developed in the hope that there would be less salt retention, a decrease in gastric peptic activity, and a reduction in the alteration of carbohydrate metabolism. Nevertheless,

all of these compounds possess the potential to cause salt retention, gastro-intestinal ulceration, and diabetes; there has been no success in dissociating the anti-inflammatory effects from the development of a negative nitrogen balance and pituitary suppression; and the anti-inflammatory effects upon which the non-specific efficacy of the drugs is dependent, by their very nature subject the patient to the dangers of serious infection.

As previously indicated, the complications frequently referred to are not complications at all but are simply the natural expression of altered function occurring in every individual if put on adrenal corticosteroid therapy of sufficient dosage for a sufficient time. These take two forms, those attributable to hyperadrenalism due to the excessive exogenous hormone, and hypoadrenalism due to suppression of the hypothalamic-pituitary-adrenal system, i.e. iatrogenic adrenal insufficiency. The latter may be annoying in the form of withdrawal symptoms when one attempts to get the patient off steroids by reducing or stopping the drug; may be more serious if there is significant reactivation of the disease which was suppressed by the steroids; or may be life-threatening if there is an absolute or relative deficiency of adrenal hormones in the event of severe stress. Since the normal homeostatic mechanisms have been interrupted, the patient has no inherent flexibility of adjustment to stress and is dependent solely now on exogenous steroid for his survival.

A third hazard, which is poorly understood, may be a complication in the true sense of the word, and is seen particularly in patients with long-term therapy of rheumatoid arthritis. This is an arteritis which may take the form of polyarteritis or, less commonly, systemic lupus erythematosus. This altered course of rheumatoid arthritis does occur in patients who have not been on adrenal steroid therapy, but the incidence is much higher in those so treated. In any event, it is a very serious and often irreversible development. A somewhat related problem is the so-called "therapeutic paradox," occasionally seen in patients with polyarteritis nodosa when steroid therapy is instituted. Healing presumably is accelerated with a resulting decrease in the size of the vessel lumen and increased ischemia of the part affected.

The case histories of seventy patients on long-term adrenal steroid therapy selected at random from 1957-1959 McGuire V. A. Hospital files were reviewed for evidence of severe untoward reactions. Table 1 shows an analysis of the total of 39 major

Table 1

Major Complications in 70 Patients Receiving Long-Term Steroid Therapy

Complication	No. of Patients
Peptic Ulcerations	12
Infections	6
Bacterial (1 Staphylococcal Septicemia)	
Fungal (1 Crytococcus; 1 Blastomycosis; 1 Nocardiosis)	
Tuberculous (2 Patients)	
Severe Osteoporosis	5
Cushing's Syndrome	4
Arteritis	4
"Rheumatoid Arteritis" (3 Patients)	
Exacerbation of Polyarteritis Nodosa (1 Patient)	
CNS Reactions	3
Manic Psychoses (2 Patients)	
Depression (1 Patient)	
Severe Edema	3
Diabetes Mellitus	2
Total	39

ill effects which developed in one half, 35, of the 70 patients. Peptic ulcerations occurred in 12 patients. Severe infections, three fungal, two tuberculous, and one bacterial, were seen in six patients of whom five succumbed. Advanced osteoporosis was present in five patients with one patient developing paraplegia from compression fractures. Full blown Cushing's syndrome was observed in four patients. There were psychotic manifestations in three, severe edema in three, and frank diabetes in two patients.

Three patients were seen with arteritis. The first of these presented with pancreatitis, pericarditis, pleuritis, and peripheral neuropathy. The second developed very severe cerebral arteritis, peripheral neuropathy, and indolent skin ulcerations. The third patient developed a bleeding peptic ulcer, peripheral neuropathy, pericarditis, pleuritis, and chronic skin ulcerations. All three have slowly improved over a long period of time with gradual reduction and then cessation of the steroids.

One patient exhibited the "therapeutic paradox". He had polyarteritis nodosa but was relatively asymptomatic except for arthralgias. He suddenly developed peripheral neuropathy and myocardial infarction when steroid therapy was begun.

It is evident, then, that, when used non-specifically, adrenal steroids only suppress, never cure; that once a patient has been started on these drugs, especially for a chronic disease such as rheumatoid arthritis, it is very difficult and often dangerous to get him off; and that serious results may accompany their use. The decision to start a patient on non-specific adrenal steroid therapy should be arrived at only

after careful consideration of all of the factors involved, weighing the possible benefits against the known ill-effects. It must be recognized, however, that there are very real and very urgent indications for these drugs.

CONCLUSIONS

1. The development of the various adrenal corticoid drugs on the market today has been described and their characteristics and use discussed.

2. The dangers of the use of these compounds have been emphasized.

3. Seventy case histories of patients on long-term steroid therapy were reviewed. Thirty-nine severe reactions were noted in thirty-five patients.

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Early Signs of Multiple Sclerosis

The nation's general practitioners were urged today to be on the lookout for early signs of multiple sclerosis when their patients pay them an office visit. Multiple sclerosis, commonly called MS, is a chronic, crippling disease of the central nervous system, usually attacking young adults. It is a "tricky disease" to diagnose, and a Duxbury, Mass., physician, writing in the November 28 Journal of the American Medical Association, outlined a number of practical hints that may alert the general practitioner to recognize the condition in its early stages.

MS usually involves a "hit-or-miss" pattern, and is likened to syphilis, which can imitate any disease.

"I have found," said the author, Dr. Walter E. Deacon, "that, clinically, certain signs and symptoms seem to be more prominent than one would expect from a 'hit-or-miss' pattern."

Dr. Deacon offered the hypothetical case of a patient who walked into a doctor's office and complained of sore throat or an upper respiratory infection. The patient is treated, but returns two or three weeks later, complaining of numbness or weakness of an arm or a leg or of visual blurring.

Many physicians might "dismiss the episode with a wave of the arm," but actually these symptoms could be "the initial onslaught of multiple sclerosis in certain susceptible persons." A careful follow-up examination, especially if the symptoms recur, may reveal changes in reflexes or some muscular atrophy or weakness.

Dr. Deacon urged practicing physicians to be more patient with neurotics, those people who have a multiplicity of such complaints as aches, pains, weakness, inability to cope with everyday chores and dizziness.

For some unknown reason, these people are particularly susceptible to MS. "Usually the patient has visited every physician within a radius of 50 miles. . . . A carefully taken history, however, may reveal a multiplicity of neurological complaints and a careful examination may reveal changes sufficient to warrant a guarded diagnosis of MS."

Frequently early signs and symptoms of MS show up during pregnancy which is considered a stress state, both mentally and physically. He said that in his own practice he has seen three cases in 16 in which MS first developed during pregnancy.

Dr. Deacon urged all physicians who practice obstetrics to include a careful neurological examination as a part of their general physical examination in order to uncover mild or incipient MS.

"A group of neuromuscular defects are so obviously due to disorders of the central nervous system that a glance at the patient determines that further appraisal and referral is necessary. These include scanning speech, tremor, obvious dragging of a leg or a wasted arm, and marked gait difficulties."

These defects reflect "the insidious, mild, and transient attacks which escape detection unless the physician is alerted to the possibility of MS and a careful follow-up is performed periodically."

The Safety of Routine Vaginal Examinations in Labor

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Study of 350 charts of labor patients at Mary Washington Hospital, Fredericksburg. Routine of quasi-sterile vaginal examination is given in detail, pointing out the safety of this practice.

IN 1956, Fara, Steward, and Standard[1] described their experiences with unlimited nonsterile vaginal examinations in labor and pointed out clearly the safety of this practice. Although many of us would be reluctant to embrace their recommendations unquestioningly, nevertheless their paper served to reassure those who have, for years previously, been practicing a modification of their routine.

It is perhaps superfluous to mention the advantages of the vaginal examination over the rectal examination in the parturient patient To begin with, it takes longer to learn what one is feeling when one uses rectal examinations to check the progress of labor. Moreover even the most skillful of us have trouble when the cervix is quite thin or posteriorly located. More important still is the fact that the rectal examination is usually inadequate to determine the position of the fetal head and frequently produces delay in the discovery of abnormalities of presentation or of funic prolapse. And, of course, from the standpoint of the patient with a severe case of hemorrhoids the rectal examination is torture itself. Some physicians have held that there is actually more danger of vulvar or vaginal contamination with rectal examinations, since the thumb of the examining hand frequently rubs over the introitus during the procedure.

It was therefore decided to present a sample of the experiences which the accoucheurs at Mary Washington Hospital have had for years with the routine use of vaginal examinations in labor. In some hospitals a vaginal examination on the labor patient is an awesome and involved affair, entailing removal of the patient to the delivery room, thorough preparation of the perineal region, a thorough surgical scrub by the examiner, etc. Although not meaning to deplore these precautions, we have practiced a much simpler procedure with virtually no sequellae and comparable advantages.

METHODS AND MATERIAL

Three hundred and fifty charts of labor patients were studied, involving 304 patients (several patients having delivered two or three times). The charts were selected only insofar as adequacy of the record was concerned in order to supply the required data. These data concerned age, race, parity, number of examinations during labor, type of amniorrhexis, method of delivery, episiotomy or lacerations, puerperal febrility and morbidity, complications of the puerperium, additional operations, perinatal morbidity-mortality, and use of chemotherapy or antibiotics. Only vaginal deliveries were studied. Labor patients who subsequently required cesarean section were excluded for two reasons: (1) there were too few to be of significance, and (2) other factors possibly involved in any morbidity were present.

The routine for the obstetrical patient at this hospital is, on admission, to give the usual soap-water perineo-vulvar shave and if circumstances warrant it, a soapsuds enema. The patient also receives intramuscularly 1 cc. of Synkayvite (5 mg.). The examinations, which are performed as often as the attending physician deems necessary, are done almost exclusively in bed. With the patient on her back, knees drawn up, aqueous Zephiran is poured over the vulva from a capped bottle which is kept by the bedside. The examiner then dons a sterile latex glove (kept in its sterile wrapper till needed) and, using Hexagerm or pHisoHex as a lubricant, performs the examination. If he desires to rupture the membranes, he uses an identical technique, using a sterile amniotome from a collection of such instruments kept in a covered autoclaved pan. In the author's experience, pHisoHex is superior to Hexa-

germ since, being more viscid, it clings faster to the glove.

Preparation for delivery includes the use of pHisoHex or Hexagerm followed by an aqueous Zephiran rinse, plus the usual sterile drapes, gowns, etc.

Routine postpartal care includes ambulation ad lib, but not off the obstetrical floor. Other patients and children under 14 are not permitted to visit. The patients are instructed in rinsing the vulva with aqueous Zephiran following use of the toilet. Heat lamp treatments are used thrice daily on patients with perineal sutures plus spraying with a sterile anesthetic preparation. The author's routine also includes the application of Neo-Polycin ointment to perineal sutures.

In the 350 labors studied, the examinations were all vaginal, all performed in bed, and the labors, deliveries, and additional operations all conducted by the author personally.

RESULTS

According to the American Committee on Maternal Welfare, puerperal morbidity means a temperature elevation of at least 100.4°F. on any two of the first 10 postpartal days excluding the first 24 hours after delivery, the temperature to be taken four times daily by mouth. (Siegel has set forth some cogent arguments against the usefulness of these standards.)[2] According to these standards, in the present series there were no cases of puerperal morbidity. However the practice at this hospital is to take temperatures routinely only three times daily unless there be an elevation. Moreover almost none of our patients stay in the hospital for 10 days, but all patients on discharge are instructed routinely to report immediately any complications. Most patients in the author's experience are anxious to be discharged as soon as possible and it often requires a good deal of firmness to keep them in for a desired minimum of 72 hours after delivery. On discharge, also, all patients are instructed to perform no household chores (except to feed and bathe the baby) for a minimum of two weeks.

Not all the 304 patients were private patients who had been followed in the office. Some had received their prenatal care through the Health Department obstetrical clinic. A few presented themselves for delivery with no prenatal care and still others were referred for hospital delivery by outlying physicians who, for various reasons, deemed such to be preferred to home delivery.

THE PATIENTS

Among the 350 confinements, there were 138 primiparae and 212 multiparae. The ages ranged from 15 to 43 years with an average age of 23.9 years. There were 65 Negro confinements and 285 Caucasian.

THE LABOR

Amniotomy in the first stage of labor was done 232 times. In the remainder, spontaneous amniorrhexis occurred.

The number of examinations done per patient is tabulated in Table I.

TABLE I

No. of Exams.	No. of Patients
1	79
2	89
3	60
4	49
5	38
6	16
7	15
8	2
9	2
Total	350

Number of examinations per patient during labor.

THE DELIVERY

There were three sets of twins, making the total births 353. Types of delivery are listed in Table II. Forceps rotation was done one time. One of the version-extractions was done for a second twin, the other for a dead premature infant in transverse lie

TABLE II

Low forceps	147
Low-mid forceps	1
Mid forceps	9
Version-extraction	2
Breech	
Spontaneous	1
Assisted	7
Extracted	5
Spontaneous vertex	181
Total	353

Types of delivery

admitted with a prolapsed arm.

Episiotomy was performed in 252 cases, principally the left mediolateral. There were, in addition, 15 first degree and 12 second degree lacerations of the perineum. There were no third degree lacerations but in two cases, rectal examination following perineal repair revealed sutures through the rectal mucosa. These were cut from the rectal side and there were no ill effects.

COMPLICATIONS OF LABOR AND DELIVERY

These included one cervical stricture, two cervical lacerations, and three vaginal lacerations. Manual removal of the placenta was performed five times. Cervical dystocia was present twice (in one case associated with a Bandl's ring) and primary uterine inertia twice. Postpartal hemorrhage occurred twice, in one case on the fifth day following a postpartal sterilization, requiring D and C.

Evacuation of a perineal hematoma was required once. Another patient required reinforcement of the perineal repair for bleeding. Partial episiotomy disruption occurred five times, requiring secondary closure in two cases.

ADDITIONAL OPERATIONS

In one patient, hymeneal condylomata which had not responded to medical treatment[3] during pregnancy were excised. A labial sebaceous cyst was removed in another patient and a third had a perineoplasty following a midline episiotomy.

Postpartal sterilization by the Pomeroy technique was performed five times. Four sterilizations were accompanied by incidental appendectomy.

One primipara with extensive vulval varices required drainage of the episiotomy at the time of primary closure. The drain was removed in 24 hours with no further difficulty.

PERINATAL COMPLICATIONS

There were eight premature infants in this series (birth weight under 2500 grams). Two were stillborn, one from a neglected transverse presentation, the second from abruptio placentae. Of the six live-born prematures, three survived.

In addition to the above stillbirths, there were four more in infants weighing over 2500 grams. One was associated with a cervical dystocia and Bandl's ring, another with preeclampsia and abruptio placentae, a third with multiple anomalies, and the fourth with prolapsed cord.

Fetal loss also included two neonatal deaths from causes other than prematurity. In one case, the labor was complicated by polyhydramnios and a brow attitude. The fetus was distressed at the time of birth and later expired. The possibility of an occult cord prolapse must be considered here. The second infant died from multiple anomalies.

Total fetal loss was thus eleven (3.1%)—six stillbirths and five neonatal deaths, none apparently connected with the primary subject under consideration here.

MORBIDITY

As stated above, there were no cases of morbidity in this series of 350 deliveries. Fara et al reported a 2.5% morbidity rate in 735 cases using their nonsterile technique. They administered antibiotics to 3.6% of their patients whereas in the present series, 56 (16%) received antibacterial drugs of various sorts.

Although morbidity, as defined, was absent, febrility (temperature of 100.0° F. and up) was present in 72 cases (20.6%). In nine of these, the temperature rose at least once to 101° F. or more. Fara et al. reported a 12.9% febrility rate. Table III lists the agents employed and the indications for use.

TABLE III

Agent	No. of cases	Febrility	Reason for Use
Penicillin	12	No	Prophylactic
Penicillin	2	Yes	URI
Penicillin	3	Yes	Fever
Penicillin	1	No	URI
Pen., Streptomycin	3	No	Prophylactic
Pen., Strept.	11	Yes	Fever
Pen., Strept., and I.V. Terramycin	1	No	Prophylactic (sterilization)
Pen., Strept., and oral Neomycin	1	No	Diarrhea
Pen., Strept., and Furadantin	1	Yes	Urinary infection
Pen., Strept., and Gantrisin	1	Yes	Urinary infection
Pen., Gantrisin	1	Yes	Dysuria
Gantrisin	4	No	Urinary infection
Thiosulfil-A	1	Yes	Dysuria
Thiosulfil	1	No	Urinary infection
Furadantin	3	Yes	Urinary infection
Furadantin	1	No	Urinary infection
Achromycin	1	No	Prophylactic
Terramycin I.V.	1	No	Prophylactic (sterilization)
Chloromycetin (oral)	1	No	Prophylactic (active tb.)
Chloromycetin Succinate (I.V.)	2	No	Prophylactic (sterilization)
Chloromycetin Succinate (I.V.)	1	Yes	Prophylactic (sterilization)
Chloromycetin (I.M.)	1	Yes	Fever
Pan-Alba	1	Yes	Fever
Cosa-Signemycin	1	Yes	Fever
Total	56		

Antibacterial Agents Used and Indications. (In all cases the penicillin and streptomycin were given intramuscularly, the others orally except as indicated.)

In the five postpartal sterilizations, 500 mg. of the broad-spectrum antibiotic was given prophylactically

in the postoperative infusion for reasons previously outlined.[4]

In addition to the tabulated cases, there were 45 instances of febrility up to 100.8° in which no antibacterial therapy was used.

Febrility rates by race are tabulated in Table IV.

TABLE IV

	Total cases	Febrile	% Febrile
Negroes	65	9	13.8%
Caucasian	285	63	21.8%
Total	350	72	

Other data are listed in Table V.

TABLE V

Febrility with 1 exam. during labor	16 (20.25%)
Febrility with 2-9 exams. during labor	56 (20.7%)
Febrility in primiparae	42 (30.4%)
Febrility in multiparae	30 (14.2%)
Febrility in cases with amniotomy	39 (16.8%)
Febrility in cases with spontaneous amniorrhexis	33 (27.9%)

The febrility figures regarding type of amniorrhexis provide a field for speculation. Why should there be less febrility (and hence less morbidity) among the cases where amniotomy was done? Since in many of these cases the membranes ruptured before admission, it may be postulated that bacterial factors produced weakening of the amnion with resultant rupture. Also to be considered are potentially traumatic factors, especially the supposedly interdicted coitus. It is interesting to consider also the possibility that the technique of the examination itself (viz., the use of a germicidal lubricant) helps cleanse the forebag and vagina, reducing thereby the bacterial concentration and, therefore, the likelihood of bacterial invasion of the uterus. The difference in the febrility rates is statistically significant.*

With reference to the increased febrility in the primiparous group, Fara noted a similar situation and explained it by the presence of episiotomy. He did not make any study regarding amniotomy.

*Chi-square is 5.957 as determined by the formula:
$X^2 = \frac{(ad - bc)^2 (a + b + c + d)}{(a+b)(c+d)(a+c)(b+d)}$ where a and b are the febrile and nonfebrile amniotomy cases and c and d are the remaining febrile and nonfebrile cases. $p < .02$. The Standard Error of the Difference is 4.8.

SUMMARY AND CONCLUSIONS

1. Presented are data concerning 350 confinements from the Department of Obstetrics and Gynecology at Mary Washington Hospital.
2. The deliveries were all conducted by the author and the course of labor followed, as per routine at this hospital, by vaginal examinations of a quasi-sterile sort.
3. There was no morbidity in this representative series. Febrility was present in 72 (20.6%) of the cases.
4. Antibacterial drugs were used in 22 patients prophylactically and in 34 patients to treat existing conditions. In 45 febrile patients, no antibacterial drugs were used, without progression to morbidity.
5. The use of unlimited routine vaginal examinations in labor is safe, accurate, and not attended by undue patient discomfort. When the routine as outlined is followed, hazards are minimal and benefits are manifold.

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A Comparative Study of Telepaque Dosage in Cholecystography

Using Single-Dose and Double-Dose Techniques

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The optimum dose of Telepaque for gallbladder examination is discussed.

IT IS WELL ACCEPTED technique in roentgenographic examination of the gallbladder to utilize a single dose of 3 grams of Telepaque and to follow this with a second single or double dose if opacification is absent or unsatisfactory. The question may be raised as to why one should not give the double dose initially in order to avoid the inconvenience of two examinations. It has been shown that opacification of the gallbladder is accentuated by the double dose technique and in some instances, this increased density has contributed to the visualization of calculi.[1]

To determine whether the initial administration of a double dose of Telepaque should be substituted for the single dose technique a study was performed in which a single dose was given to one series of patients and a double dose to another.

MATERIAL AND METHODS

Five hundred and fifty-four consecutive patients referred for cholecystography were studied at the Norfolk General Hospital. All the out-patients were given initially a double dose and all the in-patients were alternated, one receiving a single and the next a double dose. The average age of the patients was 48.7 years with a range of 16 to 87 years. There were 170 men and 384 women.

The day before the roentgen examination each patient received a high fat noon meal and a fat-free evening meal. At approximately 6:00 P.M. six Telepaque tablets were taken at five minute intervals (a total dose of 3 grams by the single dose group and 12 tablets by the double dose group). Nothing by mouth except water was permitted until the time of the roentgen examination, which was begun at approximately 8:30 A.M. the following morning.

Roentgenograms of the right upper quadrant were made routinely in the posteroanterior and slight left anterior oblique positions. If the gallbladder could be seen and no calculi were visible, upright fluoroscopic spot-films were obtained. A right lateral decubitus bucky view was made if the patient could not stand erect.

If adequate visualization did not occur with either initial dosage, a repeat dose of 12 tablets was given the following evening, and the examination repeated in the same manner. In the remainder of this paper the initial single dose technique shall be referred to as Technique I and the initial double dose technique as Technique II.

The roentgenograms were studied for degree of opacification and for the visibility of stones. The densities were first classified by number, 0 indicating non-visualizing, 1+ very faint, 2+ moderately dense and 3+ a very dense shadow. Due to technical factors resulting in films of varying quality this classification was not considered meaningful and in the final analysis was discarded in favor of a subjective evaluation of whether or not the gallbladder shadow was sufficiently opaque for diagnostic purposes.

RESULTS

The results are tabulated in Table I. One hundred and ninety-one patients were examined by Technique I and 154 or 81 per cent were initially diagnostic. Eleven per cent showed stones. There were 37 cases considered non-diagnostic because of faint visualization. These then received a double dose and 27 of them or 77 per cent were now considered diagnostic, with stones being demonstrated in five additional cases.

Three hundred and sixty-three patients were examined by Technique II and 311 or 85.7 per cent were initially diagnostic. Of the 52 which were considered non-diagnostic 44 received a second double dose, at which time 16 additional cases had become diagnostic. Stones were seen in five additional cases.

TABLE I

	Technique I (Single Dose)				Technique II (Double Dose)			
	First Study 191 Cases		Repeat Study 35 Cases		First Study 363 Cases		Repeat Study 44 Cases	
	No. of Cases	Per Cent	No. of Cases	Per Cent	No. of Cases	Per Cent	No. of Cases	Per Cent
Diagnostic examinations showing calculi	21	11	5	14	39	10.7	5	11.4
Diagnostic examinations not showing calculi	133	69.6	22	63	272	75	11	25
Inadequate visualization	37	19.4	8	23	52	14.3	28	63.6
Totals	191	100	35	100	363	100	44	100.0

With Technique I, 18.4 per cent and with Technique II, 12.1 per cent required a second examination. After the completed study however, the final results of both techniques were essentially the same.

DISCUSSION

Since the patients that were diagnosed as normal were not operated, it is not possible to state whether there were false-negatives or errors of omission in the roentgen diagnosis. No false positive diagnosis was made. In general, Technique I gave a somewhat lesser density and there were a few more repeat examinations in this group. In two instances of marked opacification of the gallbladder, one was Technique I and the other with Technique II, visualization of small opaque calculi was obscured. In both of these cases, fortunately, the calculi were seen on other roentgen examinations before or after the gallbladder examination.

Optimum gallbladder density is said to occur 10 to 12 hours after Telepaque administration.[2] In a few instances, however, it was noted that examination of the gallbladder region two to three days after the gallbladder study showed a better gallbladder opacity than the original study. This suggests that in some patients slower absorption and excretion of the gallbladder media may be more important in the visualization of the gallbladder than is generally realized. No significant difficulty was encountered from the colonic residue with either technique and no cases had to be repeated because of it.

The results of this study indicate that utilizing a double dose technique initially may permit a definitive diagnosis in a few more patients on the first visit mostly because non-opaque stones show more readily in a well opacified gallbladder. However, the over-all results are no better than with the single dose technique if a second examination is routinely performed in all doubtful cases. There are occasional instances of small opaque calculi being obscured by an overly dense gallbladder shadow. A preliminary scout film of the right upper quadrant would of course, obviate part of this difficulty. Reduction of the initial dosage to 2 grams to prevent obscuration of small opaque calculi, as advocated by Whitehouse and Martin,[3] would probably increase the number of repeat examinations without insuring visualization of the small calculi. The only appeal of this compromise method is the ease of adapting it to existing departmental routine.

SUMMARY AND CONCLUSIONS

1. Comparison of the diagnostic quality of gallbladder examination was made using a double dose Telepaque initially as compared to a control with a single dose initially. In both groups a double dose was repeated if the first examination was unsatisfactory.
2. An initial double dose technique may enable a definitive diagnosis of a few more patients on the first visit.
3. The single dose technique initially is adequate for routine cholecystography if it is followed by a repeat dose in every instance when it reveals a faintly visualizing or non-visualizing gallbladder without calculi.

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Accidental Poisoning Cases.

An official of the New York City Department of Health today termed as "alarming" the increasing number of fatalities from accidental poisonings. Dr. Harold Jacobziner, assistant commissioner of the department, called for a broad educational campaign to alert the nation to the dangers of poisoning from drugs and household products.

Writing in the November 28 Journal of the American Medical Association, Dr. Jacobziner said, "Fourteen hundred fifty deaths were reported in the United States last year from poisonings by agents other than poison gases and spoiled food. Over 400 of these deaths were in children under five years of age. More children under five . . . died last year in New York City from accidental chemical poisonings than from diphtheria, poliomyelitis, rheumatic fever, scarlet fever, and other streptococcic infections combined.

"The alarming increase in both fatal and nonfatal poisonings is related to the rise in new products and to the increase in the population risk."

"Internally taken drugs caused nearly 50 per cent of all poisonings, with barbiturates and aspirin as the chief offenders. Next in frequency were poisonings due to household preparations followed by those with externally applied drugs and cosmetics, pesticides, and miscellaneous products such as lead."

In offering a solution to cut down on the number of such accidents, Dr. Jacobziner said that nearly all poisonings are preventable. "The most important item in prevention is knowledge and information about the risk involved and the population risk. Regulations and labeling alone will not prevent accidental poisonings but must be coupled with education." He urged that such an educational program be based on facts, accurate, reliable, devoid of overdramatization, simply told, and pin-pointed to the vulnerable groups and the specific hazards.

Key points in such a program should include strong emphasis on the need for keeping medications in their original containers and also for keeping all drugs and preparations out of reach of children.

He said that proper labeling of toxic substances, as recommended by the A.M.A. Committee on Toxicology, is exceedingly important. These recommendations are embodied in H.R. 7352 which was introduced in Congress by Representative Thomas B. Curtis (R-Mo.) and is pending before the House Interstate Commerce Committee.

"Prevention is possible through education at all levels. Education requires an integrated team approach with the family physician as key member of the team. Accident prevention . . . merits the greater attention and involvement of the practicing physician."

Cardiovascular Renal Complications Of Pregnancy in Negro Women

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A survey of the problem of cardiovascular renal complications of pregnancy in Negro women. Negro women seem prone to develop hypertension after seemingly normal pregnancies.

HALIFAX COUNTY, VIRGINIA, is situated in the Piedmont area and is in that lower tier of counties which border North Carolina. Of our total population approximately 20,000 represent Negroes. At this time I have begun my 26th booklet, "Bedside Birth Records", which, if allowance is made for skipped pages, entries that didn't result in delivery, etc., would mean that I have had over 1200 deliveries since the 23rd of July 1946 when I began private practice. My cases have been roughly four colored patients to one white. If I allow for twin births and for attending the same woman for more than one pregnancy I feel that my number of Negro mothers would be about 300.

During the first years of my practice it was not unusual for women to wait until they were in labor to call a doctor for the first time. There have been two distinct forces which have caused women to seek prenatal care. The first was the unwillingness of doctors to attend any home deliveries and to require hospitalization for any woman who had not had prenatal care from the doctor concerned; the other was the Virginia State Law which required a serological test for syphilis before a patient could be delivered by a midwife. The complications of pregnancy are known to all of us; ranging from ectopic pregnancy, hyperemesis gravidarium, toxemia of pregnancy in its varying degrees, to preeclampsia and eclampsia. In my practice and in my Negro women I am observing a phenomenon which I believe constitutes another hazard of pregnancy. An elevation of blood pressure to 150/90 with or without some swelling of feet or hands is a not too uncommon occurrence in an otherwise normal pregnancy and these conditions generally respond quickly to treatment. I noticed that my patients would go through their pregnancies with normal blood pressure, 110/70 mm/Hg for example, only to show definitely elevated pressure six weeks later. In some cases there was a fairly early return to normal even without treatment. Other women were not so fortunate. By 1952 three Negro women whom I had attended for one or more deliveries had died from cardiovascular disease. The youngest was 36, the oldest 42. There was perhaps little hope for any of this group. The youngest had had blood pressure of 200/110 and 3 plus albumen at the time of her last delivery on 5-8-51. She also had a tubal ligation only to die from the symptoms of cardiovascular disease on 3-14-53. She was not seen by a physician immediately prior to her death. The one with the shortest elapsed time between delivery and death was delivered of her sixth child on 12-27-48 and died in uremia on 6-14-49, the acute stage of her final illness being only eight days, yet six months before her delivery her blood pressure was 210/130.

From the cases previously cited and others to be discussed later it would appear that there is a very definite relationship between pregnancy and prolonged elevation of blood pressure, and that this type of arterial hypertension is apt to be followed by an early death. A casual hunt into the literature for the causes of hypertension produces the following: (1), renal, 27 causes one of which is "toxemia of pregnancy"; endocrine with 11, again including "toxemia of pregnancy"; cerebral 5; and cardiovascular 8. Those 51 conditions constitute the "known" causes, to those are added the "unknown", and here we find only two kinds—essential and malignant. MacArthur in discussing Toxemia of Pregnancy[2] follows the listing given by the American Committee on Maternal Welfare. He gives:

Presented at the Annual Meeting of The Medical Society of Virginia, Roanoke, October 4-7, 1959.

A—Diseases not peculiar to pregnancy.

1) hypertensive disease, benign and malignant.

2) renal disease, nephrosclerosis, glomerular nephritis, nephrosis, pyelonephritis.

B—Diseases peculiar to or dependent on pregnancy.

1) preeclampsia, mild and severe.

2) Eclampsia, convulsive and nonconvulsive.

C—Vomiting of Pregnancy.

D—Unclassified Toxemias.

MacArthur calls attention to a number of things some of which are already known to us. He tells us that chronic hypertensive vascular disease occurs in other than pregnant women and its appears well proven that certain preeclamptics are left with a residue of essential hypertension. He quotes McKelvy[3] "an essential hypertension beginning without relation to a toxemia and preferably before the first pregnancy seems to be relatively uninfluenced by a pregnancy". Of preeclampsia MacArthur states that where the symptoms come before the 24th week or where the blood pressure is 140/90 chronic hypertensive vascular disease should be suspected. He cites oedema, hypertension and albuminuria as being diagnostic of preeclampsia, warning us to suspect hypertensive cardiovascular disease if the systolic pressure rises to or above 180 mm.hg. Moderate albumen may be found in the urine, casts and red cells mean danger. Death from preeclampsia is very low. Maternal mortality increases 15 to 20% once convulsions appear.

Eighteen cases have been selected for review. Six represent deaths, with time of death in respect to pregnancy varying from death in the first trimester in one instance to eight years after a delivery followed by tubal ligation in another. Of the six who died two had had tubal ligation and no further pregnancies. Of the 12 living patients six had tubal ligations. Three of these women had had convulsions at the time they were brought to the hospital. Another had come into the office nine days before she had a hospital delivery of a 4 lb. 12 oz. dead baby. Her blood pressure was 250/100. The urine boiled solid and contained pus and blood. Another Negro woman, this one the youngest in this group, had her first baby at 19 and two more by the time she was 21. At the time of her third delivery she did not come for any prenatal care, was seen once at her home on 3/5/52, four weeks before her delivery, when her blood pressure was found to be 200/100. No urine specimen was obtained. Seven months later she came into the hospital for tubal ligation and at this time the uterus was symmetrically enlarged. Five months later she delivered a living child with only two prenatal visits, the blood pressure 17 days before delivery being 150/90. Six weeks after delivery it was 140/70, two years later it was 158/105 and on 9/5/59 it was 178/88. The other woman at the age of 25 had her third baby on 6/29/52, four days before delivery her blood pressure was 200/120 with hand and ankle oedema. On 11/17/52 she had tubal sterilization with blood pressure of 150/90, nine months later it was 160/110, six years later, July 27, 1959 she was normo-tensive with urine being negative for albumen and having a specific gravity of 1020.

Of the other six women studied here, one at the age of 29 and after her eighth child showed four months after delivery a blood pressure of 160/94. Until a month before her delivery her course had been uneventful. Another woman between her third and fourth deliveries had a transient pressure of 150/90. Two years later she had an uncomplicated prenatal period with a normal delivery. Another woman at the age of 30 had an uneventful ninth pregnancy, delivered twins on 1/24/59 and had her blood pressure to go to 160/100 two weeks later. Under reserpine and care her blood pressure on 9/5/59 had come to 130/90. The group contained two women who presented more difficulties. The first, a 23 year old gravida vii, miscarriage one, with one dead baby was seen on 6/15/49 with blood pressure of 170/100 and urine that showed three plus albumen. She had two convulsions the day after her delivery (6/16/49). The family refused tubal sterilization. The baby died on 7/2/49. The mother at this time appeared weak and confused. Fifteen months later she delivered a living child after a prenatal course that was marked only by the mother's insistence on an abortion during the first six weeks of the pregnancy. The next case was that of a 20 year old primipara who a day before delivery had blurred vision, two plus albumen and blood pressure of 140/100 that went to 200/120 the day of delivery. Six weeks later her pressure was 120/70 and she was without complaint. My last case was that of an intelligent 29 year old woman, gravida iii, para ii whose prenatal course was uneventful but who had a focal type seizure between the delivery of the baby and that of the placenta. Her pressure at that time was 160/60, five weeks later it was 180/105. By 9/27/57 it had fallen to

130/80 and she was without complaint but with a cervical diaphragm which I sincerely hope fits her.

SUMMARY

The cases discussed have all been those of Negro women. Of the some 200 white women who complete my list only two were found to have eclampsia. Several had tubal ligations but none for hypertension nor is hypertension seen in those white women who normally apply for work at our local textile mill. Low blood pressure if anything is the rule. Of the white women who were studied many had standards of living inferior to that of my Negro patients. It is hard to blame fat back and thickening gravy for all of the difficulties experienced by my Negro women.

CONCLUSIONS

1. Eclampsia with convulsions or preeclampsia does not appear to occur more often in Negro women than in white. It would seem that eclampsia or preeclampsia need not preclude a subsequently uneventful pregnancy.
2. Negro women seem prone to develop hypertension after seemingly normal pregnancies. Under diet and medicine this is a poorly reversible condition, with further pregnancies serving to worsen the patient's condition.
3. Tubal sterilization to be of help in salvaging the mother should be considered after the second pregnancy which has carried an elevation of blood pressure during the course of it.
4. A post partum elevation of blood pressure after an otherwise normal pregnancy calls for long and careful medical care.
5. The physician who is able to follow his maternity cases over an extended period is the one best able to forestall these long-delayed deaths.

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Brain Damage Linked to Alcoholism.

Chronic alcoholism, or an associated nutritional defect, is related to brain deterioration, it was reported in the December issue of the A.M.A. Archives of Neurology.

The report was made by three doctors of the Neurology Service, Massachusetts General Hospital, and the Department of Neurology, Harvard Medical School, who studied 50 severe alcoholics to determine the effect of alcohol on the nervous system.

The relationship of brain deterioration to chronic alcoholism has been a controversial matter for many years, according to Drs. Maurice Victor, Raymond D. Adams and Elliott L. Mancall.

They said their study had convinced them that a relationship does exist between the degeneration of that part of the brain concerned in the coordination of movements (specifically termed a restricted form of cerebellar cortical degeneration) and "the excessive imbibition of alcohol, or, perhaps more likely, to an associated nutritional defect."

The 46 men and 4 women studied were afflicted with remarkably similar symptoms. In almost every instance they lacked muscular coordination of gait and of the legs. The ailment should not be confused "with the transient variety which occurs in alcoholic patients after a severe drinking bout."

Of all the factors considered as possible causes of the brain damage, only two seemed of importance —alcohol and malnutrition.

"Although the abuse of alcohol was a feature common to all our patients, six patients had actually been abstinent for varying periods of time before the onset of their cerebellar disease."

"It is difficult under such circumstances to accept the toxic effects of alcohol as the direct causative agent. Evidence . . . and examination indicated that fully three-quarters of the patients suffered from undernutrition when they were first seen by us.

"Malnutrition may also have been a factor in the remaining patients, who came to our attention only years after the onset of their illness, after a period of abstinence and concomitant improvement in their eating habits."

Intrauterine Rupture of Omphalocele

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Report of an extremely rare case of intra-uterine rupture of an omphalocele with evisceration of almost all of the abdominal viscera. Survival without incident.

THE RARE CONGENITAL MALFORMATION best known as omphalocele has long been recognized as a surgical emergency. The condition presents itself roughly once in 10,000 births and because of its rarity many practicing physicians may never encounter it. Omphalocele differs from umbilical hernia in that the defect about the umbilicus lacks a covering of skin and thin rectus fascia, leaving a transparent membrane of amnion and peritoneum covering the viscera. It is because of this thin avascular membrane that emergency surgery is necessary. Bacteria permeate this membrane and a fatal peritonitis may occur or it may rupture and evisceration may take place.

It is generally felt that the etiology of omphalocele rests on a disproportion in growth of the abdominal viscera and the abdominal cavity. Prior to the tenth week of fetal life the celomic cavity protrudes into the base of the umbilical cord and the viscera grow at an accelerated rate. After the tenth week the peritoneal cavity growth accelerates and the viscera withdraw from the sac. When there is a disparity in size between viscera and peritoneal cavity the protruded viscera may remain in the transparent sac which is devoid of covering by rectus fascia and skin and the malformation of omphalocele exists.

From statistics previously published from a large series of cases at the Children's Hospital in Boston, the size of the sac usually varies between 2 cm. and 15 cm. and the prognosis after surgery is governed by the size. The occurrence of other congenital anomalies in association with omphalocele (about 60% in this series) obviously will affect the prognosis in some cases. An infant with a sac of 7 cm. or less diameter has a 75% chance of survival following surgery. When the sac is 7 cm. to 9 cm. diameter the infant has a 30% chance. With a sac greater than 9 cm. survival chances are only 15%. According to Gross, rupture of an omphalocele sac was almost uniformly fatal prior to 1940. At Children's Hospital between 1940 and 1950 there were 17 such cases with 6 recoveries. Chemotherapy and antibiotics have changed the outlook for the infants. Rupture of the sac during intra-uterine life affords a worse outlook than postnatal rupture since the visceral peritoneum becomes quickly edematous and intestinal matting occurs.

The following case has prompted this report since it is an extremely rare case of intra-uterine rupture of an omphalocele with evisceration of almost all of the abdominal viscera, with survival without incident following immediate surgery.

CASE REPORT

B.A.B.: This newborn white female infant was born on June 18, 1959 at 12:35 a.m. at 38 weeks by frank breech delivery of an apparently normal gestation. Prenatal course had been entirely uneventful. At birth the presenting part was the uterus of the baby, and it became apparent following the breech delivery that the infant had evisceration of the uterus and bladder through a ruptured omphalocele. Shortly after birth when the infant cried the stomach and entire small bowel also eviscerated. All of these viscera were carefully covered with a sterile moist cloth and surgical consultation was obtained. The child was taken to the operating room within two hours from time of birth. The viscera were washed with saline and under general anesthesia were replaced without much difficulty. A small Meckel's diverticulum was the only added anomaly noted and this was not removed. The omphalocele defect measured 4 cm. in diameter. The membrane was debrided and the defect closed in three layers,

peritoneum, rectus fascia, and skin, using 3-0 chromic catgut. Immediately thereafter the child had a large yellow brown stool, having had a meconium stool following birth.

Post-operatively the child had no respiratory distress and in spite of a moderate amount of abdominal distention for a few days tolerated a gradual progression of feedings. For 24 hours gastric suction was used and in the 12 days of hospitalization she had intermittent diminishing regurgitation of feedings and bile. Supplemental clyses and antibiotics, procaine penicillin 150,000 units and streptomycin 125 mgs. b.i.d. were given for five days. A small eschar was debrided from the left scapular region at the site of a burn of enigmatic origin, and the child was discharged on the 12th hospital day weighing 5 lbs., 9 oz.



Fig. 1

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Fig. 2

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Probable Periarteritis Nodosa With Rheumatoid-Like Arthritis

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A case of probable periarteritis nodosa with rheumatoid-like arthritis of over seven years' survival. Treatment with interarticular hydrocortisone.

THIS CASE is reported in order to contribute to the existing knowledge and ultimate control of this disease, the diagnosis being considered 17 days after and felt established 28 days after the acute onset. In an extremely poor condition, he had hamstring lengthenings and large doses of hydrocortisone acetate injected into his major joints with rapid generalized improvement. When last seen in December, 1959, he was in good condition after more than seven years from the onset.[1,2,8,18]

CASE REPORT

An apparently normal colored male was five years old at the time of the onset of acute joint pain[9] on 10/7/52. He had a throat infection and ankle swelling for which he was given penicillin by injection and penicillin by mouth. On 10/10/52 he was confined to bed, all major joints had become swollen and tender, and his temperature was 101.4° F. On 10/14/52 he was admitted to Portsmouth General Hospital by which time he also had loss of appetite and moderate weight loss.

On examination he was poorly nourished, fairly ill and pale. He had heat, redness, and marked swelling of his knees, ankles, hips, wrists and elbows with exquisite tenderness on the slightest movement. In addition he had a septic sore throat and a tonsilar membrane. There was no heart murmur or irregularity and the lung fields were clear. A tentative diagnosis of acute rheumatic fever or serum sickness was made.

Urinalysis showed 1 plus albumin and 3-12 WBC per hpf. Blood count revealed RBC 3,200,000, Hbg. 9.5 gm. or 62%, WBC 33,000 to 46,000, Polys 87%, lymph 9%, eosin 4%. Red cells showed moderate hypochromasia and anisocytosis with some target cells.[4,7]

At the time of admission he was given penicillin injections, 50,000 units every hour, sodium salicylate, hot packs and tripelennamine hydrochloride (Pyribenzamine). On 10/18/52 he was given oxytetracycline (Terramycin). The following day he was drowsy, had difficulty swallowing and had recurrent vomiting for 24 hours, but the tonsilar membrane was essentially gone. Blood pressure was 135/96. He was treated with intravenous normal saline, glucose and Ringers lactate solution.

On 10/20/52 x-ray of his chest was essentially normal. On 10/21/52 he had definite edema of the face, neck and shoulders. The spinal fluid cell count was not increased. On 10/23/52 the feces were negative for ova and parasites. Guiac test for blood was 1 plus. He was given 300 c.c. of O positive blood in addition to glucose and intravenous normal saline. The patient was also put on sodium sulfadiazine. On 10/24/52 the diagnosis of periarteritis nodosa was considered along with disseminated lupus erythematosis. It was noted that the child continued to go down hill. His temperature remained around 102 to 103° F., and ACTH (ACTHAR Gel), 40 units, was given.[5,6]

On 10/25/52 a definite improvement of edema of the face, head and neck was noted. The child appeared to be brighter and his temperature was normal for the first time. He was continued on ACTH (ACTHAR Gel) and on 10/26/52 tetracycline (Acromycin) was started. On 10/27/52 the patient was sitting up in bed playing. The swelling was subsiding, the muscle tenderness was much less, but hypertension and leukocytosis remained.

On 10/28/52 a biopsy of the muscle was reported as having no pathological changes.[10] On 10/30/52 the ACTH was discontinued and the temperature

began to rise. On 11/4/52 he was transferred to Duke Hospital, Durham, North Carolina, with the diagnosis of periarteritis nodosa because of palpable perivascular nodules. No treatment was being given at the time of the transfer.

On admission to Duke Hospital he had a white count of 67,400; 94 segs, 2 stabs, 1 mono, and 4 small lymphs. Agglutination test was positive for typhoid para B 1:5 dilution. There was some generalized osteoporosis. Electrocardiogram was abnormal due to sino-auricular tachycardia, left axis deviation and a long Q-T interval of .28. On 2/2/53 he had 66 circulating eosinophiles per cubic millimeter. Biopsy was compatible with periarteritis nodosa.[10] He improved markedly on sodium salicylate therapy. ACTH Gel was given from 11/18/52 to 12/7/52 with marked improvement. He was then started on cortisone but on 12/12/52 he had a convulsion with transient right sided paralysis and was put back on ACTH intravenously, intramuscularly, and intramuscularly Gel. He developed pronounced Cushing's syndrome without electrolyte imbalance. On 2/21/53 he complained of sudden pain in his arms and his blood pressure rose to 180/110. Inflammatory nodules appeared which on biopsy had the appearance of fatty fibrosis. The nodules disappeared three days after their appearance. He was discharged from Duke Hospital on 3/8/52 on 30 milligrams ACTH Gel every 12 hours.

He was readmitted to Portsmouth General Hospital on 3/27/53 with the diagnosis of acute flare-up of periarteritis nodosa and Cushing-Like Syndrome. He had swelling of his ankles, moon-like face and lethargy. The patient had been maintained on ACTH at home. Blood pressure was 190/120. He was put on a salt-free diet and was given penicillin daily.

On 3/28/53 he was again given ACTH. His urinalysis was essentially normal. CBC showed RBC 3,500,000, Hbg, 10 gr. or 65%, WBC 18,000 with 67% polys, 31% lymphs and 2% eosin. He was continued on ACTH and on 3/31/53 he had marked symptomatic remission and was discharged.

On 10/6/53 he was seen as an out-patient. He had splotchy discoloration of the face and extremities with edematous patches and nodules. The knees had mild flexion contractures, and the ankles were in slight equinous. He had unsustained ankle clonus with swelling of the feet and left wrist. His grandmother stated that he had been improving for approximately a year.

On 12/1/53 the subcutaneous perivascular nodules were still present. On 10/3/54 he was admitted to Maryview Hospital because of moderate knee contractures, marked joint pain, swelling, and tenderness. There was marked guarding of joint motion and many subcutaneous perivascular nodules. The patient had been bedridden and was gradually going down hill, being very poorly developed and undernourished, weighing approximately 35 lbs. It was felt he was not improving and that nothing would be lost by varying the therapy. At that time it was felt that he was very near death. The RBC was 3,800,000, WBC 19,000, Hbg. 7 gm. or 47%. There was anisocytosis, poikilocytosis and hypochromasia. The urinalysis was essentially normal.

On 10/4/54 he was given blood transfusions and placed on oxytetracycline and chloramphenicol (Chloromycetin).

On 10/6/53 under general anesthesia a total of 250 mgs. of hydrocortisone acetate were injected, 25 mgs. into each shoulder, hip, knee and ankle joint, and 12.5 mgs. into each elbow and wrist joint. It was found that his knees could not be straightened under anesthesia and, therefore, the hamstring tendons were lengthened and long leg casts were applied to hold his knees in extension. Biopsy of the skin and subcutaneous tissue (Fig. 1) showed

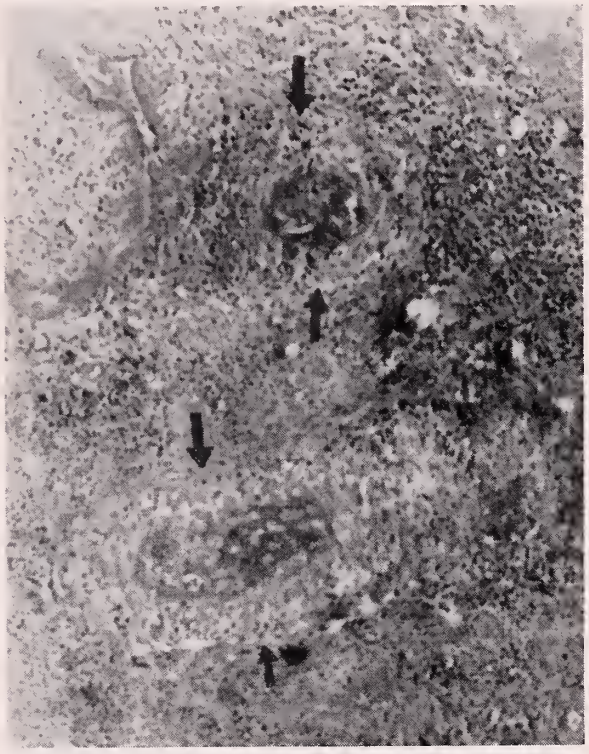


Fig. 1—Biopsy showed perivascular lymphocytic infiltration. The small arteries showed fibrinoid necrosis of the inner wall. The outer wall is infiltrated with lymphocytes, eosinophils and a few neutrophils. Arrows show outer limits of the aterial walls.

perivascular lymphocytic infiltration in the dermis and subcutaneous fat containing many hystocytes and lymphocytes. A small subcutaneous artery showed fibrinoid necrosis of the inner wall, with the outer wall intensely infiltrated with lymphocytes, eosinophils and a few neutrophils. The pathologist, Dr. Alvin P. Long, reported the appearance of classical periarteritis nodosa.

The day after surgery his temperature dropped to normal. He was discharged on 10/13/54. Because of the possibility that an infection might be the underlying cause, he was continued on oxytetracycline and chloramphenicol until 10/20/54. The patient had marked improvement after hospitalization and when seen again on 1/4/55 the joint pain had recurred and he continued to have subcutaneous nodules.

He was readmitted to Maryview Hospital on 2/3/55. He was given tetracycline because of an otitis media of the right ear. On 2/7/55 under general anesthesia, he again had injections of hydrocortisone acetate into his major joints. His temperature dropped to normal the day after the injections, and he was discharged from the hospital on 2/9/55.

On 5/3/55 because of recurrence of pain in his joint, he was given prednisone. On 11/22/55 he was improved to a marked degree, but he still had flexion contractures of approximately 30 degrees of his knees. There was no particular joint swelling or pain on motion. There were no subcutaneous nodules palpated. The patient at that time was no longer receiving any medication. The mother said he told her he wanted to get up and walk one day and did so with her help. Prior to that time we had encouraged the patient to walk, but he would not do so because of pain. During the acute and chronic stages of the joint swelling, the patient complained bitterly when the physiotherapist attempted to move his joints through a passive range of motion or tried to get him to walk.

On 7/24/57 the major joints were slightly enlarged but stable, with normal flexion and extension of his hips and knees. He had scattered 1/2 to 1″ areas of recurrent cutaneous discoloration. An L. E. cell preparation reported on was negative.

CONCLUSIONS

It appears that this patient has had a generalized collagen disease[13] which would probably have been considered rheumatoid arthritis except for the obvious presence of perivascular inflammation identical with periarteritis nodosa. It appears in this case that there is apparently a connection between rheumatoid arthritis and periarteritis nodosa.[13]

When last seen the patient appeared to be fairly typical of a case of "burned-out" rheumatoid arthritis with non-painful enlargement and some limited motion of the major joints involved. The periarteritis nodules were not palpable.

There appears to be some general response to large doses of Hydrocortisone Acetate injected into multiple joints.



Fig. 2—April, 1959. He had about normal motion of his extremities without pain. His bow legs may or may not have been due to the surgery or the disease or decreased vitamin intake, resulting from the disease and loss of appetite. His general condition was good.

SUMMARY

A case of probable periarteritis nodosa of over 6 years duration with rheumatoid-like arthritis is reported. He was treated with cortisone derivatives and supportive therapy. He had what appeared to be general response on two occasions to large doses of Hydrocortisone Acetate into the joints. He had hamstring lengthening for knee contractures. He had been without an acute attack for over 3 years when seen on April 7, 1959. (Fig. 2). When seen in December, 1959, his condition was still good.

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Blue Shield Plans

More than 1,600,000 persons enrolled in the 73 Blue Shield Plans located in North America during the first nine months of 1959, and during the same period Blue Shield paid out over $487,500,000 for medical-surgical care rendered to members, according to the National Association of Blue Shield Plans.

Total membership in the various Blue Shield Plans reached 44,214,441 as of September 30, 1959, which represents an enrollment of nearly 24 per cent of the total United States population.

Total payments to doctors in behalf of members, which exceeded 480 million dollars during the nine month period ending September 30, represented 90 per cent of the total income of all Plans. Meanwhile, the Plans expended just under 10 per cent of total income for administrative expenses.

Public Health....

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Typhoid Fever Outbreak Among Migrant Workers, Winchester, Virginia, 1959

In these days of approved water supplies and milk produced under public health ordinances and followed by pasteurization, explosive outbreaks of typhoid fever are rare. Yet, in September 1959, such an outbreak did occur among migrant workers who had recently come into the State to pick apples around Winchester.

On Sunday, September 20th, the Director of Public Health of the Winchester-Frederick County Health Department notified the Director of the Bureau of Communicable Disease Control of the State Department of Health that two individuals had been admitted to the Winchester Memorial Hospital on the 15th, one on the 16th and one that day, all presenting symptoms and signs of typhoid fever. He asked for typhoid vaccine and for assistance in epidemiologic investigation. The following day these requests were complied with.

It was learned that there is a migrant workers' camp located in the city limits of Winchester in which were housed a group of Bahamian Negroes numbering about 800 and a group of American Negroes numbering approximately 300. The two groups lived apart and had no association in quarters or in eating. The Bahamian group had a common mess with a cook who prepared all of their meals. The American group had no single dining hall but each looked to his own way of getting his food. The water supply for all was the city water and sewage was disposed of through flush toilets connected with the city sewers.

All of the typhoid suspects were from one group, of which J. A. was the leader, which included thirty-one adults and several children, the latter in two families, the G. family and the C. family. The home residences of these people extended from Florida to North Carolina. They had been together as a group for many weeks with the exception of a few persons who joined them when their group disbanded while they were working on the Eastern Shore of Virginia around the end of July or first of August, and two men who joined them on their arrival in Winchester. There had been no sickness in the group until after their arrival in Pennsylvania.

J. A.'s group left the Eastern Shore of Virginia on August 5th and went to a farm in Pennsylvania to pick peaches. They were housed on this farm and their water supply was from four wells on the farm. They said that this water "looked bad, smelled bad, and tasted bad." They were told to boil it before drinking it. In addition, there was a spring which was located near woods where they defecated on the ground, and a ditch from which some occasionally drank. Within three to five days after their arrival a number of them became sick with "cramps and diarrhea." Inquiry brought out the fact that the stools of the ill were bloody, leading to suspicion that they probably had dysentery. They left Pennsylvania on September 5th and arrived in Winchester on the 6th.

Members of the group were questioned and it was learned that several had become unwell during their last days in Pennsylvania and had "dragged along" when they got to Virginia. These persons had lost their appetites, had been "slow", and their heads had "bothered them terrible." Finally, they had to give up and go to the hospital. In addition to those already listed, two were admitted on September 21st, one on the 24th, one on the 25th, and one on the 26th. One of those admitted on the 15th died on the 23rd, the only death that occurred. Typhoid organisms were recovered from the blood or stools of all of the patients. In addition, three members of the family of one of the men admitted on the 21st, the mother and two children, had positive stools but were not sent to the hospital. There was one other person with a positive stool who was never ill, a woman who joined the group in Virginia just before they went to Pennsylvania.

Three of the group went to New York State just prior to the time the group left Pennsylvania or just after they arrived in Virginia. The New York State Department of Health was notified. They reported that they located these men and found them to be in good health but before stool collections could be made, the three had departed to parts unknown.

The Pennsylvania State Department of Health was

notified of the outbreak. They checked the farm on which the group had worked and took water samples from the four wells. All were found to be heavily contaminated with coliform organisms.

The North Carolina State Department of Health was notified because two of the group had returned to their homes in that State after the illnesses developed in the group. Stools from these men were negative. Duke University Hospital was questioned regarding a man from the group who had stopped there on his way to his Florida home to be treated for some illness. The reply was that this man and two women who accompanied him had been seen in the out-patient department, that they had complained of diarrhea, had been given medication and had been told to return the next day but they did not reappear. The three were later located and checked in Florida and found to have negative stools.

The West Virginia State Department of Health was notified because a group of migrant workers in that State had had some association with the Virginia group.

The Maryland State Department of Health called because they had heard of the outbreak and were anxious to know if there were any danger of spread of the disease to that State. They were told that there were no contacts known that might involve them.

The Florida State Department of Health was notified because the leader and many of the group were from that State and because his wife and several others had gone back to their homes. These people were investigated and all stool cultures were negative. The blood serum of one person showed a high Vi antigen titer though the O was negative and her stool cultures were negative.

The Alabama State Department of Health was notified because one of the patients and her newborn infant had returned to her home in that State. This woman was continuing to have stools positive for S. typhi and needed to be followed. Also, the woman who had joined the group in Virginia just before they left for Pennsylvania and who had stools positive for S. typhi while in Winchester, though she showed no signs of illness, had returned to her home in Alabama. The Virginia State Department of Health was anxious to know if this person had ever been known to have had typhoid fever or if she had been on the roster of known carriers. Another matter of inquiry was regarding the phage typing of her stool culture. This had been tried on specimens collected in Virginia but the colonies were "rough" and phage typing could not be done. Phage typing of four of the patients showed that they belonged to the group C_1, while two others were not typable. It has never been learned whether this woman had had typhoid at any time or if she has been previously known as a typhoid carrier. The report on her stool culture made in Alabama was that it was phage typable and that it belonged to group C_1.

In Winchester, one of the group, while showing a stool culture negative for S. typhi, had a stool culture positive for Shigella flexneri. This supports the opinion previously expressed that members of the group had developed shilgellosis in Pennsylvania.

The conclusion is that the group was healthy until their arrival in Pennsylvania. There some of them developed illnesses that were probably the result of shigella infection. Moreover, something else began to develop about the time they were leaving Pennsylvania. It is known that they were using water in that State which was heavily contaminated with coliform organisms. Typhoid fever developed shortly after their arrival in Virginia. Was the water the source of this infection or was the infection probably the result of a carrier in their midst? The latter seemed most likely. Such a person must have become a recent associate of the group because they had been healthy until their arrival in Pennsylvania. It was finally determined that a woman who joined the group in Virginia just before they left for Pennsylvania was found to have the organisms of S. typhi, phage type C_1, in her stools. Those who were ill and whose stool cultures were phage type showed organisms belonging to this group. It is not known just how she might have spread the infection, through water or through food, but it is believed that this woman was the probable source of the Winchester outbreak of typhoid fever in a group of migrant workers.

MONTHLY REPORT OF BUREAU OF COMMUNICABLE DISEASE CONTROL

	Dec. 1959	Dec. 1958	Jan.-Dec. 1959	Jan.-Dec. 1958
Brucellosis	0	0	27	21
Diphtheria	2	2	13	33
Hepatitis	42	23	502	286
Measles	301	569	15021	22420
Meningococcal Infections	10	10	90	98
Meningitis (Other)	29	18	421	272
Poliomyelitis	5	11	284	159
Rabies (In Animals)	6	11	166	252
Rocky Mt. Spotted Fever	0	0	38	32
Streptococcal Infections	534	661	8458	7105
Tularemia	2	7	20	36
Typhoid	2	1	27	43

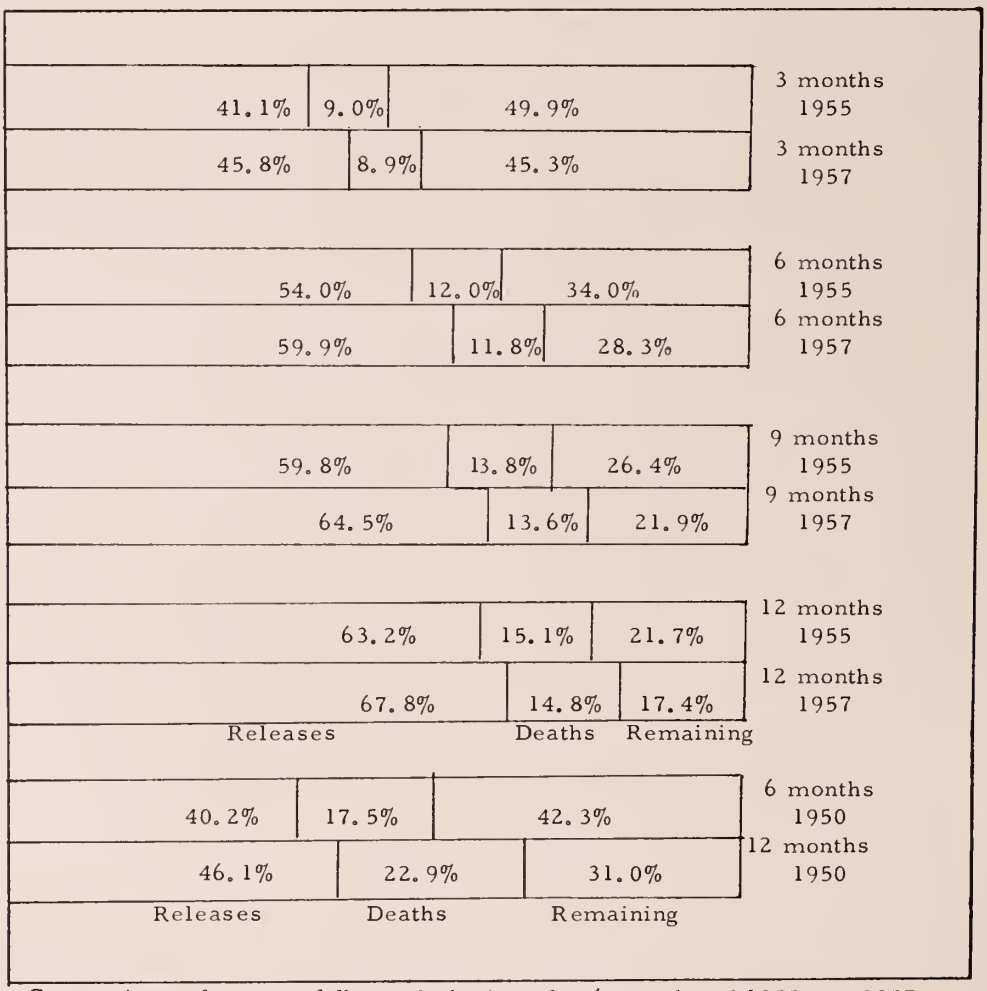
Mental Health....

EDNA M. LANTZ

A Hopeful Trend in the Rate of "Significant Releases" from Mental Hospitals in Virginia

Although the number of admissions to the four mental hospitals have been increasing year after year, there has been very little change in the resident population. This is due to an increase in the number of patients who recover sufficiently to leave the hospital either by a direct "discharge" or on a "trial visit".

A statistical comparison of "significant releases" for two different periods in 1955 and 1957 indicates a definite improvement in the "significant" release rate. "Significant releases" are defined as those patients released from the hospital who stayed out of the hospital more than seven days. They include direct discharges from the hospital and trial visits,



Comparison of status of first admissions for 6 months of 1955 and 1957 at 3, 6, 9, and 12 months from date of admission and first admissions for 1950 at 6 and 12 months.

and escapes who remain out of the hospital longer than 30 days. They do not include short holiday visits of less than seven days.

EDNA M. LANTZ, *Statistician, Department Mental Hygiene and Hospitals.*

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

In a study of the six months period from July 1, 1955, to December 31, 1955, compared to July 1, 1957, to December 31, 1957, patients were followed from the date of first admission to the date of "significant release".

In the six months—July 1, 1955, to December 31, 1955—there were 1,088 first admissions. For the six months two years later—July 1, 1957, to December 31, 1957—there were 1,309 first admissions, a definite increase in first admissions for a similar six months period in the same calendar months, but the resident population remained relatively static due to increased release rate.

The accompanying Chart shows the percentage of patients that were released, died and remained in hospital for the specified time from their date of admission. Even though approximately 220 more patients were admitted in the 1957 period than the 1955 period, there were about 5% more patients released in 1957 than in 1955.

A similar study was made earlier for admissions for the year ending June 30, 1950,[1] which involved 2,081 patients admitted for the 12 month period. On the basis of significant releases for six months of 1950, the released percentage was only 42% as compared to 54% in 1955 and 60% in 1957. In 1950 the release rate for twelve months was 46%, deaths 23% and 31% remained in hospital. In 1955 the release rate within twelve months was 63%, deaths were 15% and those remaining in the hospital amounted to 22%. In 1957, 68% were released, deaths amounted to 15% and 17% remained in hospital. In 1950, the death rate was 23%, much greater than 1955 and 1957. This shows the favorable release rate was not due to mortality.

It is fortunate that the release rate has improved. If it had not improved, the mental hospitals would, of course, have a much higher resident population than they now have and the physical facilities would be far more overcrowded than they are.

The increase in "release rates" of patients could be due to a number of factors, among them—more trained personnel, better treatment programs, more willingness of families and communities to accept discharged patients when able to return home or to the community, entering the hospital for treatment in the earlier stages of their illness, and a healthier general economy.

This increase in the significant release rate in recent years is encouraging. There will always be some patients that remain in the hospital for long periods of time and some will never be released except by death because they are either too ill to leave the hospital (or there is no place for them to be placed out of the hospital). In future years it is hoped that this increase of significant releases will continue to grow though such growth is expected to be small because we are reaching a saturation point.

It is to be noted that the above figures apply only to the four mental hospitals. The situation at our training schools and hospitals for the mentally retarded is quite different.

1. Virginia Medical Monthly—Mental Health—Nov. 1951 pp. 619-620.

It's Not Too Soon to Make Your Plans to Attend the
Annual Meeting of
The Medical Society of Virginia
at
Virginia Beach, October 9-12, 1960

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

Control of Utilization Through Planning

Hospitals, doctors, and Blue Cross-Blue Shield are being criticized because of the increasing use the public is making of its hospital facilities. "Abuse" and "unnecessary use" today are oft-heard words—even though no one as of today has defined how much hospital care is enough.

Attempts by hospitals, doctors, and Blue Cross-Blue Shield to defend the public's right to hospital care have been met by the baffling declaration that after all the public is the boss; that the public is going to take over the public's hospitals unless the public quits going to its hospitals as often as the public chooses. This would be funny except that it presents the danger of confusing the public into a sense of irresponsibility toward the manner in which it uses its hospitals, and toward the necessity of paying the cost of the service it is demanding and getting from its hospitals.

In our economy, price has as one of its functions the curbing of demand. But price has not been permitted to exert its controlling influence on the demand for hospital care because of the unique features of that care. First, hospital and medical care are about the only two direct services that the public expects and gets, regardless of whether the producer is paid. Second, hospital care is sold at cost and the price charged for hospital care reflects the cost of care rather than demand. This means that price is not permitted to exercise its usual function of braking demand by moving upward independently of cost. Finally, both the cost and price effects on demand are almost eliminated because of the manner in which hospital care is financed.

For most goods and services, there is a direct relationship between use and the effect of use on personal resources. Prepayment, however, has blurred this relationship in connection with the individual's use of hospital care. The effects of use are reflected only in an increased monthly charge by his prepayment plan. The individual's use is spread over all members of the plan, and it is spread by the month over a future time period.

Prepayment can be made less adequate—by inclusion of deductibles and co-insurance—so that there will be a financial barrier between the public and its use of hospital facilities. But this mechanism might all too often create a barrier where there really should be none; or produce an insufficient barrier —for the more affluent members of the public produce only a minor irritation, not a deterrent. Thus it appears that the only effective means of controlling hospital utilization, short of outlawing hospital admissions, is to control supply. A hospital bed that does not exist cannot be used. One that does exist tends to be used.

Concerning hospital facilities we must substitute planning for the economic checks and balances which, in this field, are inapplicable or ineffective. To date, however, not enough attention has been paid to all the talk about the need for planning or to the great deal of writing about how to do it.

Hospital planning here involves the matter of location, size, and scope of hospital facilities. It is not directly concerned with plant layout.

A hospital represents a cooperative effort by a community of users who have pooled their resources to provide the sort of specialized equipment and highly trained personnel that no one patient or doctor could provide individually, and which no patient could afford to use and maintain by himself. It represents pooled needs for medical facilities as well as pooled resources. For purposes of hospital planning, the pooling of needs is more important.

Pooling of resources simply makes the services available; proper pooling of needs prevents unnecessary duplication of services and mislocation of hospital facilities.

Why have we not had better planning? Because our general hospitals are autonomous institutions established as independent units rather than as parts of a whole. Hospital planning has not been more effective because it has not had the necessary leverage for enforcement. This leverage, nonetheless, can be provided.

Because of their interest in the future of health

Editor's Note: This article has been adapted from "Let the Public Control Utilization Through Planning" by Ray E. Brown, Hospitals, 33: December 1, 1959.

care in this country, doctors appear to be the logical persons to take the initiative in establishing a leverage-mechanism. Through their organizations, as well as individually, doctors can encourage citizens to set up voluntary regional hospital planning bodies, the activities of which would lead to a coordinated hospital system.

The possibilities for constructive activity by regional planning bodies are almost limitless: review all Hill-Burton applications in their district and recommend priorities; promote coordination among base, district, and community hospitals; develop administrative and financial arrangements for sharing services among specific hospitals; develop joint programs in phases of nursing education, laundry services, and other aspects of hospital management; work toward a plan where maternity, pediatric, premature infant, and certain classes of medical and surgical patients would be concentrated—in the interest of economy and quality of care—in designated hospitals.

Perhaps. however, it might be considered that completely voluntary groups would not have enough control over individual hospitals to permit implementation of their programs. If they doubt the efficacy of these proposed groups, doctors, through their organizations, could promote establishment of an alternative mechanism—requiring the franchising of hospitals by a state agency established for that purpose. Admittedly, the idea of governmental control in any form is repugnant to all dedicated to the voluntary way of life and our voluntary hospital system. However, state franchising might offer the surest means of regulating hospitals with the least damage to the values of the voluntary system.

There undoubtedly are other mechanisms of enforcing competent hospital planning in addition to the two here suggested, the defects of which are acknowledged. But the fact remains that some mechanism must soon be operative, and it is equally factual that unless doctors have a hand in establishing that mechanism they are apt to regret whatever scheme might be foisted upon them and their hospitals.

Hospital Construction Declines.

A decline in private hospital construction during 1959 despite increasing need for facilities was partly attributed to rising cost by The American Association of Fund-Rising Counsel, Inc.

New private hospital construction for the first nine months of 1959 was valued at $425 million, a 7 per cent decline over the 1958 comparable figures, according to the AAFRC. Approximately $150 million of the expenditure for new construction came in current philanthrophy. Meanwhile the average daily census in hospitals increased by 4.5 million, to a total of 26.5 million.

The capital needs of hospitals, estimated at $500 million a year for the next 20 years, must be in large part met through private contributions. It estimates that 55 per cent or $275 million annually should be obtained from private sources.

Disparity between patient charges and hospital costs is growing. In 1957, patient care cost approximately $.95 while the same patient in 1958 cost the hospital approximately $1.52, an increase of 62 per cent. Funds normally earmarked for construction and improvement are frequently siphoned off to make up the difference.

In spite of the 7,000 hospitals in the United States, at the start of the 1958-59 fiscal year, government sources have estimated total need of 864,236 new beds and replacements of 280,273 beds which are in use but below minimum standards.

The cost of building and replacing over one million beds is astronomical, the Association said, particularly in view of increased construction costs. Cost of a bed today is more than double the $11,987 price in 1948.

The American Association of Fund-Raising Counsel, Inc. is a non-profit organization of 31 professional firms specializing in directing, counseling and organizing fund raising activities in the United States and Canada.

Miscellaneous . . . .

The Role of the Physician in the Education of the Nursing Student

Doctors have contributed to the teaching of nursing students in Virginia since the establishment of the first school of nursing. Even though schools of nursing today employ full time faculty, the doctor continues to hold an important place in the nursing students educational experience.

In addition to the classroom, much student learning occurs in the hospital at the patient's bedside. Here the student nurses have the opportunity of observing the doctor's approach to the patient as well as of seeing specific treatments and procedures being done. Many efficient nurses owe their ability to recognize danger signs and symptoms evidenced in their patients to some doctor who taught as he worked with his patients. Many nurses have chosen certain clinical areas in which to work because some busy doctor took time to teach them as he operated or carried out a procedure or saw a patient and his explanations awaked their interest. The doctor, as the authority who directs and plans the patients treatment and as the possessor of medical knowledge, holds a unique place in the nurses' horizon; therefore, the nursing student is attentive and responsive to his instruction.

The picture portrays one example of the physician's contribution to the education of the nursing students at the University of Virginia Hospital. Miss Elaine Smith, a senior nursing student, is seen assisting Dr. Albert J. Paquin, Jr., Professor of Urology, as he demonstrates a procedure in patient care. Miss Nellie B. Carwile, R.N., Assistant Professor of Nursing, observes the student performance. The patient, Mr. Leo Silverstein, is interested in participating in this teaching experience.



Other opportunities for learning are offered the University of Virginia students by the hospital staff by clinical conferences, lectures, participation in seminars, attendance at rounds, observation in surgery and procedures in the various clinical areas, with special instruction given by the doctor as he performs the procedure.

Woman's Auxiliary . . . .

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Richmond.

On October 16th, the Woman's Auxiliary to the Richmond Academy of Medicine held a luncheon meeting to which we invited members of the Richmond Dental Auxiliary, the MCV Woman's Club, and other special guests.

We invited as large a group as possible because of current interest in the subject of the panel discussion—"Today's Youth". Panel members were: Mrs. Henry Decker, Parent; Mr. William Brock, Principal, Thomas Jefferson High School; Dr. Robert Bugg, Headmaster, St. Christopher's School; Dr. George Kriegman, Psychiatrist; and Mr. James Montgomery, Jr., retired Juvenile Judge.

This stimulating discussion, together with pertinent questions from the floor, produced a program of the greatest interest to all of us.

In November we held our annual Public Relations luncheon to which presidents of other women's organizations throughout the City were invited. This year 43 visitors attended the luncheon.

We were especially proud and pleased to have as our guest speaker one of our most outstanding Virginians, Dr. W. Linwood Ball, past vice-president and member of the Board of Trustees of the American Medical Association, past president of the Virginia Academy of General Practice and the Richmond Academy of Medicine.

In his talk, "Where Are We Headed?", Dr. Ball argued strongly against current inflationary practices in government. Americans must realize, he said, that we can't get something for nothing, and the greatest thing any nation can provide is a fixed security.

Inflation and democracy, declared Dr. Ball, are not good bedfellows. Why is medicine interested in Federal aid programs? Because of attempts to socialize medicine. "If medicine is socialized, then it will be easier to take dentistry, pharmacy, engineering, department stores and farming. Whether we like it or not, modern medicine has become involved in all the cross currents of public interest, public opinion, and public action. Too many professional men, especially physicians, are overcome by political timidity and we do not get up the courage to make a political effort."

Dr. Ball urged that we all become informed about the Forand Bill coming before Congress, that we oppose it for its socialistic provisions and its tremendous cost to the taxpayers, and that we support instead the Jenkins-Keough Bill, now under consideration, which would permit self-employed individuals to withhold money to provide for their own retirement. Congressmen, said Dr. Ball, do not like to be tagged "inflationists". Write to your Congressman.

Dr. Ball reminded us that speakers from the Richmond Academy of Medicine are available to organizations interested in learning more about the controversial Forand Bill.

On October 19th, the Auxiliary sponsored a house tour of five Richmond homes for the benefit of Sheltering Arms Hospital. Tea and refreshments were served at the home of Dr. and Mrs. Carrington Williams. Many weeks of preparation by many Auxiliary members accounted for the wonderful success of the tour, and many more members served as hostesses on the tour. Chairmen were Mrs. Charles W. Byrd and Mrs. John F. Butterworth, III. In thanking all those who worked so hard, Mrs. Byrd announced that $2300.00 was raised for Sheltering Arms.

EDITH V. HAWKINS

Editorial....

Sudden Blanching of the Hair

"My hair is grey, but not with years,
Nor grew it white
In a single night
As men's have grown from sudden fears."

WHEN Byron penned these lines in *The Prisoner of Chillon,* he neglected to give references to substantiate his statement that hair could become white in a single night and the writer was inclined to believe that this was just another example of poetic license.

There have been many instances of sudden whitening of the hair recorded in the medical literature but there has been a note of unreality in most of these reports that has done little to dispel the above impression. The hair of Queen Marie Antoinette was said to have turned white after she heard her death sentence. The same was reported in the case of the Spaniards Dideo and Diego Osorio under torture. The beard and eyebrows of d'Andelot reputedly turned white where his hands rested when he heard the death sentence of his father pronounced by the Duke of Alba. Even more bizarre were cases in which the color change was said to have taken place in the course of a few hours.

Landors, writing in Virchow's Archives in 1866, stated "One of the oldest problems of pathology which has escaped scientific research and is still clouded in mythical darkness is the sudden whitening of the hair. I call it a mythical darkness, because the reports, dating mostly from olden times, sound more like fairy tales than scientific observations." With these thoughts in mind the following report is of more than passing interest.

Alfred J. Ephraim, in the February, 1959, issue of the A.M.A. Archives of Dermatology, reported sudden loss of pigment in the hair of a patient he happened to be treating at the time this change took place. This well documented instance of sudden change in color substantiates, to a degree, the above poetic allusion as well as the other tales of rapid graying, which may, or may not, have followed emotional or physical stress. Dr. Ephraim's explanation of this medical curiosity appears to be a logical one but the mechanism by means of which the hair underwent this sudden change still remains a mystery.

The case, in brief, was as follows:

A white man, 63 years of age, was under the care of Dr. Ephraim, dermatologist, because of a generalized contact dermatitis which was responding to treatment. On June 14, 1957, he was pushed down a flight of subway stairs. A fracture of the wrist and contusion of the occipital region resulted. The injuries, though painful, were not serious. He lost no time from work.

The day following this accident he was seen by Dr. Ephraim. At this time the patient's hair was dark brown, abundant and wavy with some graying at the temples. Six weeks later he returned and at this visit his hair was completely white, aside from a fringe of dark hair near the neckline. The patient stated this change occurred during the three weeks immediately following his accident. The major change took place during the third week.

A microscopic examination showed the usual picture found in white hair. While the mechanism of blanching is not understood, a late development in this case gave a logical explanation as to the cause of this phenomenon.

Seventeen months after the accident and the associated color change, the patient returned to see Dr. Ephraim because of the appearance of depigmented areas on the scalp, forehead, arms, hands, and trunk. These had become evident following exposure to sunshine in Florida. The scalp beneath the white hair was depigmented. The explanation of the sudden change in the color of the patient's hair now became evident. The depigmented hair had been part of an underlying vitiligo, which had passed unnoticed until made obvious by the severe sunburn sustained in Florida. Vitiligo, or leukoderma, may occur in any race and from early youth to advanced age.

This, no doubt, explains other reported instances of sudden blanching. The explanation is prosaic and unromantic but at least it bears out Byron's statement in the above quoted poem. It also may remove the suspicion, sometimes undeserved, when a hospitalized patient suddenly becomes gray, that the color change resulted from his inability to dye his hair while confined to the hospital.

Harry J. Warthen, M.D.

Society Activities . . . .

Fredericksburg Medical Society.

Dr. Lloyd F. Moss succeeds Dr. D. W. Scott, Jr., as president of this Society for 1960. Dr. William D. Liddle was re-elected vice-president and Dr. J. E. Grimes re-elected secretary.

Newport News Medical Society.

Dr. John Q. Hatten has been elected president of this Society, succeeding Dr. Samuel H. Mirmelstein. Dr. John W. Massey was named vice-president and Dr. A. C. Stanton, secretary-treasurer.

The executive committee is composed of these three officers and Drs. Mirmelstein, Dr. I. Floyd Nesbitt, and Dr. Russell V. Buxton.

Northampton County Medical Society.

Dr. William F. Bernart, Nassawadox, was elected president of this Society at the December meeting held in the Nurses Home on the 15th. Other new officers are Dr. Thomas B. Hardman, Cape Charles, vice-president; Dr. William S. Burton, Nassawadox, secretary; and Dr. E. M. Kellam, Nassawadox, was named to the Board of Censors.

The retiring president, Dr. J. R. Mapp, thanked the members for their individual presentation of medical-social-economic subjects which has been accomplished at the monthly meetings during the year. He then presented the general subject of radiation and atomic medicine, particularly in association with committee hearings and intended legislation by the Virginia General Assembly on setting up a regulatory body for radiation as a part of the State Health Department. He showed that radiation is a part of our natural environment by reviewing the atomic structure of the solar system and all matter. He developed historically scientific accomplishments which have led to utilization of radiation in medicine in the last sixty-four years and also extensively in industry. Dr. Mapp then presented a new film called "Radiation, the Physician and the Patient" which was made under the joint sponsorship of the American College of Radiology and the Rockefeller Foundation.

Danville-Pittsylvania Academy of Medicine.

At the annual meeting of the Academy, Dr. Joseph W. Milam was elected president, succeeding Dr. Asa Viccellio. Dr. Leroy Soper was named vice-president and Dr. Glenn B. Updike, Jr., secretary.

Richmond Academy of Medicine.

At the meeting of the Academy on December 8th, Dr. Robert V. Terrell succeeded Dr. Thomas W. Murrell, Jr., to the presidency. Dr. E. L. Kendig, Jr., was elected president-elect; and Drs. R. Campbell Manson and Carrington Williams, Jr., vice-presidents.

New Board members are Drs. H. Chesley Decker and Robert B. Trice. Dr. Murrell will be chairman of the Board and other members are Drs. Kendig, Terrell, Manson, and John M. Meredith.

The Medical Society of Northern Virginia

Met at the Clarke County High School, Berryville, on December 15th, with the president Dr. George R. Waterman, Woodstock, presiding.

New officers were elected as follows: Dr. Bradford Bennett, Winchester, president; Dr. Dennis P. P. McCarty, Front Royal, vice-president; and Dr. Robert York, Berryville, secretary-treasurer. The Board of Censors will consist of Drs. E. B. Sherman, H. P. Maccubbin and Harold Miller, Sr.

The next meeting of this Society will be held at Luray in April.

The Fourth District Medical Society

Met at the Petersburg General Hospital, Petersburg, on December 15th, under the presidency of Dr. Carney Pearce, Petersburg.

The following program was presented: Spontaneous Hemorrhage—A New Clinical Entity by Dr. Philip Jacobson, Petersburg; Viral Hepatitis by Colonel Roy Roberts, M.C., Fort Lee; The Therapy of Disease of the Blood Vessels of the Brain by Drs. T. R. Johns, Chief, Neurological Service, University of Virginia Hospital, and F. E. Dreifuss, Assistant Professor of Neurology at the University.

The Floyd County Medical Society

Held a re-organizational meeting on December 11th. Dr. J. Cleve Rutrough, Willis, was elected president, and Dr. F. Clyde Bedsaul, Floyd, secretary.

Arlington Medical Society.

Dr. Robert L. Norment has been installed as presi-

dent of this Society. Other officers elected in December are: president-elect, Dr. Michael A. Puzak; vice-president, Dr. Sigmund Newman; secretary, Dr. Howard O. Mott; treasurer, Dr. Robert B. Neu; and member-at-large, Dr. Stephen J. Sheehy.

Virginia Society of Internal Medicine.

Dr. R. Bryan Grinnan, Jr., Norfolk, has been chosen president-elect of this Society and will be installed as president at the next meeting, which will be held February 20th in Charlottesville, in conjunction with the Virginia Section of the American College of Physicians.

Virginia Academy of General Practice.

The dates for the annual meeting of the Academy are May 13-15. All scientific sessions and exhibits will be at the Convention Center, Virginia Beach, Headquarters Hotel is The Cavalier.

West Virginia Academy of Ophthalmology and Otolaryngology.

The Academy will hold its annual meeting at the Greenbrier Hotel, White Sulphur Springs, West Virginia, April 10-12.

Guest speakers will be Dr. Harold G. Scheie, Professor of Ophthalmology, University of Pennsylvania School of Medicine; Dr. Charles E. Iliff, Associate Professor of Ophthalmology, Johns Hopkins University School of Medicine; and Dr. Oscar T. Becker, Clinical Associate Professor of Otolaryngology, University of Illinois.

For additional information, contact the secretary, Dr. Albert C. Esposito, First Huntington National Bank Building, Huntington, West Virginia.

American Society of Psychosomatic Dentistry and Medicine.

The annual meeting of this Society will be held at the Shoreham Hotel, Washington, D. C., March 11-13. Lectures and round table discussions will be given by outstanding authorities in the field of semantics, linguistics, psychosomatics, and hypnosis. All dentists and physicians are cordially invited to attend.

For detailed program, contact Dr. Jesse Caden, Program Chairman, 5213 Connecticut Avenue, Washington 15, D. C.

American College of Surgeons.

Dr. John Paul North, Dallas, Texas, will become The Director of the College, effective January 31, 1961. He will succeed Dr. Paul R. Hawley who has been Director since 1950.

Southern Surgical Association.

Dr. Francis M. Massie, Lexington, Kentucky, was named president of this Association at its annual meeting at Hot Springs on December 10th. He succeeds Dr. George G. Finney, Baltimore, Maryland. Dr. Massie is a graduate in medicine of the University of Virginia, class of 1919.

Norfolk County Medical Society.

The Annual Spring Clinic of this Society will be held at the Center Theatre, March 12th, at 10:00 A.M. The program is as follows:

Aldosteronism—Dr. William Parson, Professor of Internal Medicine, University of Virginia School of Medicine.

Infection in the Allergic Child—Dr. Susan C. Dees, Professor of Pediatrics, Duke University School of Medicine.

The Role of Pituitary Suppression in the Management of Common Thyroid Disorders—Dr. Colin G. Thomas, Jr., Associate Professor of Surgery, University of North Carolina School of Medicine.

Basic Concepts of Backache—Dr. Joseph S. Barr, Chief of Orthopedic Surgery, Massachusetts General Hospital; Clinical Professor of Orthopedic Surgery, Harvard Medical School.

The Megacyst Syndrome, a Common Cause of Pyuria in Children—Dr. Albert Paquin, Professor of Urology, University of Virginia School of Medicine.

The Transplantation of Tissue, including Developments in Autotransplantation and Progress in the Field of Homoplasty—Dr. Herbert Conway, Chief of Plastic Surgery, The New York Hospital; Professor of Clinical Surgery, Cornell University.

Therapy of Pulmonary Failure—Dr. W. T. Thompson, Jr., Professor of Medicine, Medical College of Virginia.

News Notes . . . .

New Members.

The following new members have been admitted into The Medical Society of Virginia, since the list published in the January issue of the Monthly:

Edward Charles Bauer, M.D., Roanoke
Robert James Buchanan, M.D., Churchland
Richard H. Egdahl, M.D., Richmond
Lester Langdon Gillespie, M.D., Richmond
Jan Marimus, M.D., Fries
Jerome David Perlman, M.D., Norfolk
Frederick William Shillinger, M.D., Hampton
William Henry Sipe, M.D., Roanoke
John Moore Stoneburner, M.D., Danville
Doris Lee Arnold Thurman, M.D., Vinton
William Allen Thurman, Jr., M.D., Vinton
Eugenia Urbanovich, M.D., Petersburg
Stuart Bruce White, M.D., Blackstone

Dr. Caudill Retires.

Dr. W. C. Caudill, Pearisburg, has retired (or at least semi-retired) from a medical career of forty-six years. His career may be divided into three parts —first as a country doctor; the second part when he was seeking "a little relaxation" by getting into politics. He served twenty years in the General Assembly as delegate and state senator, retiring from this second part in 1956. The third part is the present tense—including retirement, a trip to Florida and a lot of concentration on golf, hunting and fishing—and maybe seeing an occasional patient and making a call.

Dr. Caudill is a past president of The Medical Society of Virginia and the Southwestern Virginia Medical Society. The Medical College of Virginia conferred an honorary degree on him in 1952. He was also named as "Physician of the Year".

Dr. Rucker Honored.

Dr. Samuel L. Rucker, Jr., has been honored by the Moneta Ruritan Club by being named the winner of their first Good Citizenship Award. The plaque read: "To Dr. S. L. Rucker, Jr., whose skill and reputation as a doctor has extended far beyond the limits of this community, whose ability to diagnose human ills accurately has given health and life to many, whose willingness to serve the people has made him available, day or night, and on many occasions when he was more ill than his patients, and whose unselfishness has caused him to minister without thought of personal gain or enrichment," The whole community was represented but "Dr. Sam" was absent—out on calls, as usual—and his sister received the award for him.

Narcotic Prescription Writing.

The Bureau of Narcotics, Treasury Department, advises they have received many recent inquiries asking if an interne would be privileged to write narcotic prescriptions on the hospital supply for patients of the out-patient department.

The answer to the above question is in the negative. The Federal narcotic law contemplates that narcotic drugs shall only be prescribed, dispensed or administered by a duly qualified and registered physician. The Federal narcotic law does not contemplate that internes in a hospital shall be allowed to order narcotic drugs only under the direction and supervision of a duly qualified and registered practitioner. In order for an interne to prescribe narcotic drugs, he must be registered under the Federal narcotic law.

Dr. Edwin L. Kendig, Jr.,

Has been elected chairman of the Richmond City Board of Health. He succeeds Dr. Harry J. Warthen who has been chairman since 1956. Other members of the Board are Drs. Wyndham B. Blanton, Jr., and Jason R. Lewis.

Drs. Crawford and Jarrett.

Drs. John C. Crawford and Alvin Q. Jarrett announce the opening of their new office for the practice of obstetrics and gynecology on Laskin Road at Gay Drive, Virginia Beach.

Mary Washington Hospital Staff.

Dr. T. B. Payne has been elected head of the staff of the Mary Washington Hospital, Fredericksburg. He succeeds Dr. W. W. Butzner, Jr. Dr. James G. Willis has been elected vice-president, and Dr. T. Stacy Lloyd re-elected secretary.

Dr. C. C. Powel,

Harrisonburg, has been re-elected president of the Rockingham Cerebral Palsy Treatment Center.

Alexandria Hospital Staff.

Dr. John E. Roberts has been named president-elect of this staff. Dr. George Speck took office as president in January, succeeding Dr. C. Albert Hudson.

Dr. George G. Ritchie, Jr.,

Richmond, has been re-elected president of the Christian Youth Corps of America.

Dr. E. Palmore Irving,

Petersburg, has been elected president of the Will Rogers Tent, Circus Saints and Sinners.

Staff of Florence Crittenton Home.

The 50th Anniversary of this Home in Norfolk was celebrated in December. The staff elected Dr. Charles P. Brown as its president for the coming year and Dr. William B. Hoover, vice-president.

Virginia Baptist Hospital.

Dr. L. M. Howard, Jr., has been elected president of the medical staff of the Virginia Baptist Hospital, Lynchburg. Dr. H. L. Riley, Jr., was named vice-president and Dr. Parker H. Lee, secretary. New members of the executive committee are Drs. Ernest G. Scott, Joseph W. Houck, and Lee. Other members are Dr. Howard, Drs. L. R. O'Brian, Jr., Joseph E. Warren, John C. Risher, Edwin B. Vaden, and Dr. Riley.

Posthumous Award to Dr. Kinser.

The Danville Kiwanis Citizenship Award for 1959 was presented posthumously to Dr. Prentice Kinser, Jr., who died in June of 1959. An editorial in the Danville Register stated, "Dr. Kinser had not taken it with him (Brotherly love). He left it behind to warm the hearts of others who were perceptive enough to see what motivated him and to recognize its goodness and its usefulness in their own lives."

Cancer Award.

Dr. William T. Sanger, Richmond, has been awarded the J. Shelton Horsley award, a citation of honor from the Virginia Division of the American Cancer Society. He was chosen for his outstanding contribution to the cancer control program in Virginia over the past few years.

Norton Hospital Staff.

Dr. Gordon E. Shull, Big Stone Gap, has been elected president of the St. Mary's Hospital in Norton. Dr. Joseph Phillips, Norton, was named vice-president, and Dr. John H. Dellinger, Norton, secretary. Dr. Phillips was named chief of surgery; Dr. Lewis K. Ingram, chief of obstetrics; and Dr. Delmas B. Jones, acting chief of medicine.

Richmond Memorial Hospital Staff.

Dr. Benjamin W. Rawles, Jr., has been re-elected chief of staff at this Hospital. Dr. Meyer Vitsky was named vice chief of staff and Dr. Fleming Gill secretary. Re-elected as chiefs of this divisions are: Dr. W. Hughes Evans, obstetrics and gynecology; Dr. Frank Phillip Coleman, surgery; Dr. T. W. Murrell, Jr., dermatology; Dr. George K. Brooks, neuro-psychiatry; Dr. Thomas Walker, anesthesiology. New elections are: Dr. Dennis Morey, medicine; Dr. Harold I. Nemuth, general practice; Dr. Harold Johnson, ophthalmology; Dr. Custis Coleman, general surgery; and Dr. Beverley Clary, orthopedics.

Virginia Association of Medical Assistants.

At the annual meeting of this Association, Mrs. E. S. Carwile, Lynchburg, was elected president, succeeding Mrs. Mildred Phippen, Richmond.

Annual Clinical Conference.

The Louise Obici Hospital, Suffolk, will hold its annual clinical conference on March 2nd.

At the morning session, Dr. Marion C. Waddell, Medical College of Virginia, will speak on The Place of Contact Lens in Eye Disease; and Dr. Richard King, U. S. Naval Hospital, Bethesda, on Super-Voltage in the Treatment of Malignant Disease.

The afternoon session will be: The Place of Anti-Coagulant Drugs in the Treatment of Cardiovascular Disease by Dr. Frank W. Davis, Jr., Johns Hopkins University, Baltimore; Surgical Treatment of Disease of the Nervous System by Dr. James W. Watts, George Washington University School of Medicine, Washington, D. C.; Oral Drugs in the Treatment of Diabetics by Dr. Garfield G. Duncan, University of Pennsylvania; and The Rationale for the Use of the Tranquilizer Drugs by Dr. Robert A. Senescu, Medical College of Virginia.

The evening session will be at the Hotel Suffolk. Following dinner, Mr. Horace Cotton, Southern Pines, North Carolina, will speak on The Shadow of Socialized Medicine.

Dr. George J. Carroll is chairman of the conference. Five hours category I credit will be given by the Academy of General Practice.

Heart Fund Campaign

Heart Research Day and Heart Fund Campaign Kick-Off took place in Virginia on February 2.

The research phase of the day's program presented to the public a few of the highlights of the research that is bringing help and hope to heart patients.

Virginia Heart Association supports a number of heart research projects and medical traineeships at the Medical College of Virginia and at the University of Virginia School of Medicine and various educational and community service activities throughout the state.

In twelve years, the investment of more than 40 million Heart Fund dollars in research has speeded heart surgery, helped to bring forth such new drugs as those that control hypertension and guard against repeat heart attacks. Research also has greatly lessened the perils of rheumatic fever and rheumatic heart disease, and helped make possible other far-reaching gains in diagnosis, treatment, prevention, and even cure. These advances were made possible by contributions to the American Heart Association and its affiliates, one of which is the Virginia Heart Association with its chapters and councils.

The Heart Fund Campaign Kick-off launched the month's drive for donations to continue and expand programs of research, lay and professional education, and community service designed to combat our nation's Number One Health Enemy—diseases of the heart and circulatory system. This enemy is responsible for approximately 54 per cent of all deaths in this country. In Virginia, the rate is a little over 53 per cent.

March of Dimes.

Richmond and the nation have just experienced one of the worst polio years in history—in spite of the fact that your March of Dimes contributions made possible the Salk vaccine five years ago.

Newton H. Webb, campaign director for the Richmond-Henrico Chapter, reminds you that the polio fight is not yet over and urges you to support this program and the two new programs—birth defects and arthritis—of The National Foundation.

Local victims of polio, from 1959 and from previous years, will be needing assistance for years to come if they are to live happy, useful lives. Some will need costly operations to straighten twisted limbs. Some will need extensive physical therapy to strengthen weakened but still functioning muscles. Others need expensive special braces, shoes and crutches. As in the past, your New March of Dimes gifts will help them.

Just as important, your contributions will aid in pressing vital research, research that may some day solve the mysteries of life and aid in the prevention of the birth defects, which mark one of every 16 newborn babies, and arthritis, which is suffered by upwards of 11,000,000 children and adults in this country. Your gift to the New March of Dimes also will be used to educate badly needed doctors, nurses, medical social workers, physical therapists and occupational therapists in a vast scholarship program begun by The National Foundation last year.

For Sale.

Owing to the recent death of Dr. Walter Lee Kline, his house (office) and complete medical equipment are for sale. Poquoson consists of six consolidated communities on the peninsula in York County, ten miles from Hampton.

An assured practice is here for any doctor who cares to come and investigate.

Address 1247 Poquoson Avenue, Poquoson, Virginia. (*Adv.*)

For Sale.

Late model General Electric Vertical Fluoroscope. Contact Mrs. Sheppard K. Ames, Cape Charles, Virginia—Telephone number 108. (*Adv.*)

Wanted.

Male Psychiatrist; Diplomate or with three years approved training; to join group practice 145-bed approved psychiatric hospital. Salary: $15,000-$18,000 first year; $20,000-$25,000 second with incentive factor. Write Box 700, care the Virginia Medical Monthly, 4205 Dover Road, Richmond, Virginia. (*Adv.*)

Current Currents

MEDICARE: Government authorities are again calling attention to the fact that many physicians apparently are not charging their usual fees when participating in the Medicare Program. The Medical Society of Virginia has been requested to emphasize that fees originally negotiated under the Program are maximum and must not be used in lieu of a physician's usual fees when those fees are lower.

FORAND BILL: Action is picking up on the Forand Bill front. Latest developments, as reported by the Washington Report on the Medical Sciences, are as follows: A Congressional liberal bloc is setting up a special task force to promote the Forand Bill (H. R. 4700) or something very similar. More than 100 members of the House are reported to have identified themselves with this new group, posing a formidable threat to those Southern Democrats generally aligned with Republican conservatives.

Medicine has become more and more alarmed over the Bill and its possibilities. This prompted a special call on Vice-President Nixon by leaders of the American Medical Association. His visitors were Dr. Louis M. Orr, President; Dr. E. Vincent Askey, President-Elect; Dr. F. J. L. Blasingame, Executive Vice-President, and his Deputy, Dr. Ernest B. Howard.

Six hundred officers of labor unions were scheduled to attend a three day legislative conference in Washington sponsored by AFL-CIO. On the agenda were such items as the conduct of the crusade for the passage of the Forand Bill, federal subsidies for consumer controlled medical care programs, construction grants for medical schools and other legislative matters of similar philosophy.

INTERNAL REVENUE: Commissioner Dana Latham has described steps being taken to eliminate tax abuses having to do with questionable entertainment expenses. It now seems clear that attendance at conventions and enrollment in ocean-going and overseas seminars will come within scope of this drive against dubious interpretations of business expenses. Individual returns, as well as those filed by corporations and partnerships, will request information concerning the attendance of family members at conventions and meetings.

DID YOU KNOW DEPARTMENT: More than 1,000 pharmaceutical companies in this country are manufacturing drugs. The resulting competition has brought about a great amount of research.

Motorists should be especially watchful on Saturdays for bike riders. That is the day most bike accidents occur, according to the National Safety Council.

DUES: Members of The Medical Society of Virginia recently received statements (white) for 1960 membership dues. Within the next month, statements (yellow) will be mailed for AMA dues, and members are urged not to confuse the two.

UNIONS AND HEALTH: Labor unions in New York are reported to be considering building their own hospital chain and establishing their own medical insurance system designed to compete with Blue Cross-Blue Shield.

An article in a recent issue of Public Health Economics disclosed that the program might possibly develop to the point where a labor sponsored medical school would be established to train physicians as a means of overcoming opposition to many union health plans.

It is reported that 26 major New York unions compiled reserves of $750 million in their welfare and pension funds. These funds are administered under joint labor management trusteeship and employers as well as unions would have to approve the use of such funds to build hospitals.

MALE NURSES: The Veterans Administration is encouraging the recruitment of men as professional nurses in its 170 hospitals. Approximately 500 are employed at this time, many of them holding key positions in nursing education and administration. It is interesting to note that there are an estimated 11,000 registered men nurses in the United States.

CIVIL DEFENSE: The AMA Council on National Defense will sponsor the 11th Conference of the County Medical Societies Civil Defense Organization on the weekend of November 5-6, 1960, at the Palmer House in Chicago. All states and county medical societies have been requested to arrange and budget for one of their physician representatives to attend the Conference. The programs are specifically tailored for the information and guidance of committees on emergency medical service.

KEOGH-SIMPSON: Prints of the following three films on the Keogh-Simpson Bill (H.R. 10) may be obtained from the American Thrift Assembly, Room 612, 1025 Connecticut Avenue, N.W., Washington 6, D.C:

Smathers: 16 mm color film with running time of 10 minutes. Features lively and informative interview.

Moss-Smathers: 16 mm black and white film with 10 minute running time. Covers highlights of Bill.

Allott-Simpson: 16 mm black and white film with 10 minute running time. Mr. Simpson tells why he feels legislation is essential.

Obituaries . . . .

Dr. Wyndham Bolling Blanton,

Widely known physician of Richmond, died January 6th. He was sixty-nine years of age and received his medical degree from the College of Physicians of Columbia University in 1916. He did graduate work at Columbia and in Berlin and Edinburgh, beginning his practice in Richmond in 1920 where he was considered a leader in the field of internal medicine.

Dr. Blanton was named associate professor of medicine at the Medical College of Virginia in 1930 and became professor of the history of medicine in 1933. He was appointed professor of clinical medicine in 1939 and became professor emeritus of clinical medicine and the history of medicine in 1958. Dr. Blanton organized an immunology clinic at the College in 1936, retiring from this in 1954. Under his direction, this clinic had become one of the largest of its kind in any medical college in the nation.

Dr. Blanton had served as president of the Richmond Academy of Medicine, the Richmond Society of Internal Medicine; vice-president of the American Allergy Academy and the Southern Medical Association; and was a member of numerous other medical organizations. He had been an active member of The Medical Society of Virginia for forty years.

Dr. Blanton was Editor of the Virginia Medical Monthly from 1933 through 1942. Upon his retirement he was made Editor Emeritus and has continued on the Editorial Board since that time. He had been a contributing editor of the Journal of the History of Medicine and Allied Sciences and was past associate editor of the Annals of Medical History.

As chairman of the Historical Committee of The Medical Society of Virginia, Dr. Blanton wrote the three volumes of History of Medicine in Virginia—Seventeenth, Eighteenth and Nineteenth Centuries. This was a project that took years of research and writing and represented a contribution to the Society from Dr. Blanton.

In 1933, the degree of doctors of letters was conferred on Dr. Blanton from Hampden-Sydney College. He was a member of the Society of Colonial Wars and a former president of the Society of Colonial Virginia. He was also a member of Pi Kappa Alpha, Phi Chi, Omicron Delta Kappa and Sigma Delta Chi fraternities and Phi Beta Kappa, honorary scholastic society. He was a member and past president of the Society of the Cincinnati in the State of Virginia. He was intensely interested in historical Richmond and was the first president of the Historic Richmond Foundation, chartered to preserve houses and sites of historical value in the city.

Dr. Blanton was chairman of the Board of Trustees of Union Theological Seminary. He and his father, the late Dr. Charles Blanton, had served on the medical staff of the Seminary and the Presbyterian School of Christian Education for more than half a century.

With the numerous medical, historical, religious and other activities which occupied Dr. Blanton, he still had enough time to manage a large herd of purebred Holstein-Friesian cattle in Cumberland County. He could run a tractor and pitch hay with the best of men.

Dr. Blanton is survived by his wife, three sons and a daughter. Two sons are Dr. Wyndham Blanton, Jr., and Dr. Frank Blanton, who were in practice with him.

Dr. Emmett Trible Gatewood,

Prominent Richmond throat specialist, died January 5th after a long illness. He was a native of James City County and seventy-three years of age. Dr. Gatewood graduated from the Medical College of Virginia in 1910 and practiced in James City County for a while before studying in New York and under the late Dr. Chevalier Jackson in Philadelphia. He became an instructor in otolaryngology at the Medical College of Virginia in 1920, was appointed clinical professor in 1944, and made professor emeritus in 1958. He was a director of Johnston-Willis Hospital and chairman of its department of otolaryngology and bronchoscopy.

Dr. Gatewood is credited with being the first specialist in Virginia to perform a successful laryngectomy for cancer. He was a former vice-president of the American Laryngological, Rhinological and Otological Society. In 1950 he was elected to membership in the American Laryngological Association, a senior society with a national membership limited to 100 members. Dr. Gatewood was a former president of the Richmond Academy of Medicine, the Richmond Nose and Throat Society, and the Virginia Society of Ophthalmology and Otolaryngology. He was a member of many local and national med-

ical organizations. Dr. Gatewood joined The Medical Society of Virginia in 1913.

His wife and two sons survive him. A brother is Dr. William L. Gatewood, also of Richmond.

Dr. James Walker Walters,

Well-known physician of Lynchburg, died December 27th, at the age of seventy-nine. He was born in Madison County and graduated from the Medical College of Virginia in 1905. Dr. Walters was an eye, ear, nose and throat specialist and had practiced in Lynchburg for more than forty years. He served as a Captain in the Medical Corps of the Army during World War I. Dr. Walters was active in the civic and cultural life of Lynchburg and was a member of the Kiwanis Club. He had been a member of The Medical Society of Virginia since 1905.

His wife and a daughter survive him.

Dr. Healy.

Dr. Merritt W. Healy, having practiced medicine for more than fifty years, in West Virginia, Gloucester County, and Norfolk, retiring two years ago, died on August 14, 1959.

Born in Youngsville, Pennsylvania, and still quite young, his parents moved to Newport News, where he was educated in private schools. In 1903 he matriculated in medicine at the former University College of Medicine in Richmond, and after receiving his degree of M. D. interned at the Virginia Hospital.

Serving as Lieutenant, at the beginning of the 1st World War, with the 29th Division he served full time and was promoted Captain. Wounded in battle he was awarded the "Purple Heart".

He was member of The Medical Society of Virginia and was presented a fifty year Certificate, member of Norfolk County Medical Society, also a Mason, and a member of Ghent Methodist Church.

Dr. Healy, was a man of many splendid traits of character, beloved by his patients and all of those who knew him. Surviving is his wife, Sarah Weisiger Healy.

Therefore Be It Resolved, that these resolutions be spread upon the pages of the minutes of the Norfolk County Medical Society and copies be sent to Mrs. Healy and the Virginia Medical Monthly.

Cary E. Via, M.D., *Chairman*
C. C. Smith, M.D.
R. B. Grinnan, Jr., M.D.

Dr. Woods.

Dr. Thomson Butler Woods, age 70, who retired in 1952 after four decades of the practice of medicine in South Norfolk, died of cerebral hemorrhage in a Norfolk nursing home.

Dr. Woods was very active in civic and religious affairs as well as in his very large general practice.

Dr. Woods was prepared for his medical career at the Citadel in Charleston, S. C., and graduated in medicine at the University of Maryland Medical College.

He was a veteran of World War I and a Captain in the Medical Corps of the U. S. Army.

Dr. Woods was a man of genial personality and greatly beloved by his patients and the community at large.

In the death of Dr. Woods, the Norfolk County Medical Society has lost a valuable member and the Southside a well beloved physician.

The Committee recommends that a copy of this Memorial be spread upon the minutes of the Norfolk County Medical Society, a copy sent to the Virginia Medical Monthly and a copy to the hereaved family.

H. G. Ashburn, M.D., *Chairman*
K. K. Wallace, M.D.
A. Laibstain, M.D.

Dr. Hix.

Dr. Nicholas Flood Hix, Wise, Virginia, died in a Bluefield, W. Va. hospital January 1, 1959. He apparently was recovering nicely from an operation, when he suffered a fatal heart attack.

Dr. Hix was born at Prospect, Prince Edward County, Virginia, December 8, 1876. He was educated at Randolph-Macon Academy, Bedford, The College of William and Mary, Williamsburg, and was graduated from The University of Virginia, School of Medicine with the degree of Doctor of Medicine in 1904.

He became engaged in the general practice of medicine in Birmingham, Alabama, after graduation, for two years, after which he moved to Wise, where he enjoyed an active practice until the time of his death.

Dr. Hix was associated in general practice with Dr. F. S. Givens, a former resident of Wise.

He was a member of Wise County Medical Society and received recognition by this society in 1958 for 50 years in active practice. He was also a member of The Medical Society of Virginia and the American Medical Association.

In addition to being one of Wise County's most outstanding physicians, he was the owner and operator of one of the largest apple orchards in Wise County.

Dr. Hix is survived by his wife and three daughters.

Therefore, Be It Resolved that the members of the Wise County Medical Society extend their deepest and most sincere sympathy to the family of our departed colleague.

Be It Further Resolved that this resolution be recorded in the minutes of the Wise County Medical Society and copies be sent to the members of his family and to The Medical Society of Virginia.

C. H. Henderson, M.D., *Chairman*
T. J. Tudor, M.D.
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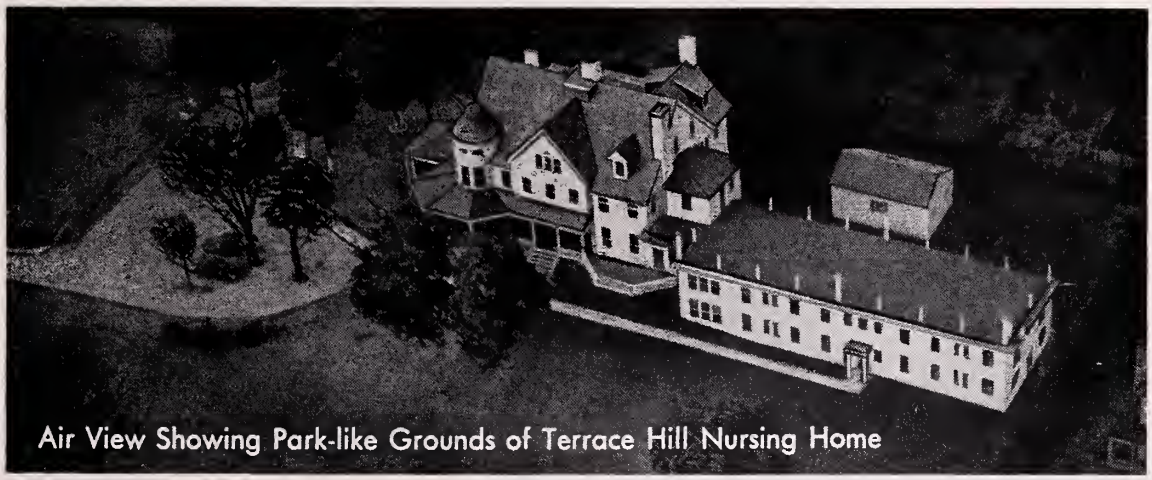
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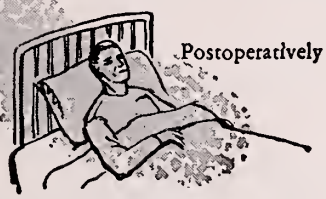
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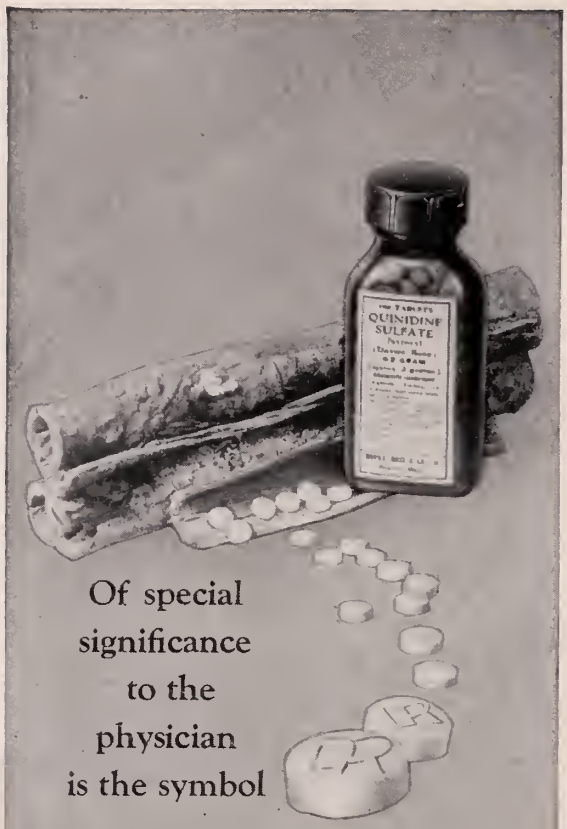
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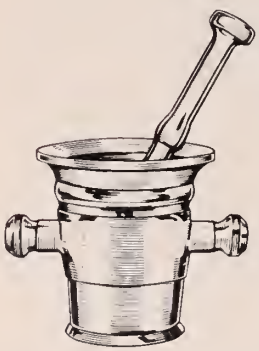
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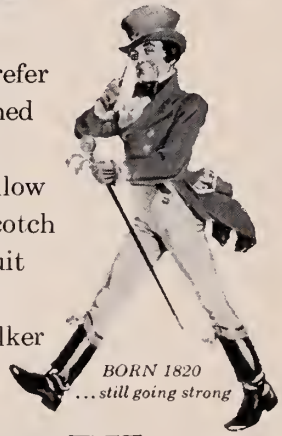
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The antibiotic effect of the clinically available mixture. SYNCILLIN. is greater than that of either of its two component isomers alone against many important pathogens, including some penicillin-resistant staphylococci. This phenomenon has been described as *Isomeric Complementarity*.

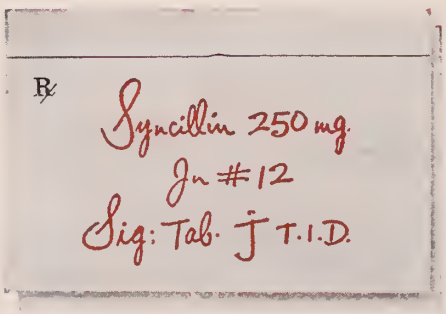
Significance of higher blood levels with SYNCILLIN

Higher blood levels may be of value with organisms of only moderate penicillin sensitivity where doubling the blood concentration may be essential for effective bactericidal action. In addition, these higher levels may be necessary where there is infection in areas with a poor blood supply.[6] Under these circumstances a higher blood concentration may provide the increased diffusion pressure required to deliver adequate amounts to the tissue. Also. antibiotic activity of SYNCILLIN is directly proportional to oral dosage. Increasing the dosage may, therefore, enhance the drug's effectiveness in certain cases.

Efficacy of SYNCILLIN against staphylococci and other resistant organisms

Studies have shown that SYNCILLIN is effective *in vitro* against 60 to 75% of hospital "staph" strains, while penicillin G and penicillin V are now effective against only 30 to 50%.[1, 2] Therefore, if clinical judgment indicates the use of penicillin, SYNCILLIN would be expected to be the most effective. However, since some strains are still resistant to SYNCILLIN as well as to the other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment.

There have recently been reports of decreased efficacy of penicillin in streptococcal[3] and gonococcal[4, 5] infections. The emergence of penicillin-resistant gonococci appears to be associated with an increase in the incidence of gonorrhea all over the world. When a less sensitive strain is encountered the higher blood levels produced by SYNCILLIN may be most helpful.



major therapeutic advantages accompany molecular asymmetry

I L L I N™

Relation of intermittent high blood levels of SYNCILLIN to antibacterial efficacy

SYNCILLIN. like all clinically available penicillins, is bactericidal. Periodic high blood concentrations are sufficient to permit complete eradication of sensitive pathogens. Continuous high blood levels are not required with SYNCILLIN. According to Eagle,[7] "Soon after penicillin attains effective concentrations, the bacteria cease multiplying; and the bacteriostatic effect persists for a number of hours after penicillin has fallen to concentrations that are wholly ineffective....The therapeutic significance of this postpenicillin recovery period is enhanced by the fact that the recovering bacteria, damaged but not killed by the previous exposure to penicillin, are abnormally susceptible to the host defenses. In consequence, the bactericidal process *in vivo* continues for many hours after the drug itself has fallen to ineffective concentrations."

Reduced rate of inactivation of SYNCILLIN by staph penicillinase

Bacterial resistance to penicillin has been attributed to the action of penicillin-inactivating enzymes produced by the invading organisms. SYNCILLIN is less affected by staphylococcal penicillinase than either of its component isomers. Further, SYNCILLIN is shown to be less inactivated by this enzyme than penicillin V and penicillin G. Penicillinase from *B. cereus* likewise inactivates SYNCILLIN less rapidly than penicillin V and G. But this would not impede the therapeutic use of this penicillinase in allergic reactions. This is because the massive dosage with which this enzyme is administered would effectively destroy SYNCILLIN in the body.

References: 1. Wright, W. W.: Microbiology Report to Bristol Laboratories Inc. 2. Kligman, A.; Morigi, E. M. E.; Wheatley, W. B., and Albright, H.: Paper presented at the Seventh Antibiotic Symposium, November 4-6, Washington, D.C. 3. Editorial: New England J. Med. **261**:305 (Aug. 6) 1959. 4. King, A.: Lancet **1**:651 (March 29) 1958. 5. Epstein, E.: J.A.M.A. **169**:1055 (March 7) 1959. 6. Kass, E. H.: Am. J. Med. **18**:764 (May) 1955. 7. Eagle, H.: J. Bact. **58**:475, 1949.

Indications: SYNCILLIN is recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci. In addition, SYNCILLIN is effective against certain strains of staphylococci resistant to other penicillins. SYNCILLIN, like other oral penicillins, is not recommended at the present time in deep-seated or chronic infections, subacute bacterial endocarditis, meningitis, or syphilis.

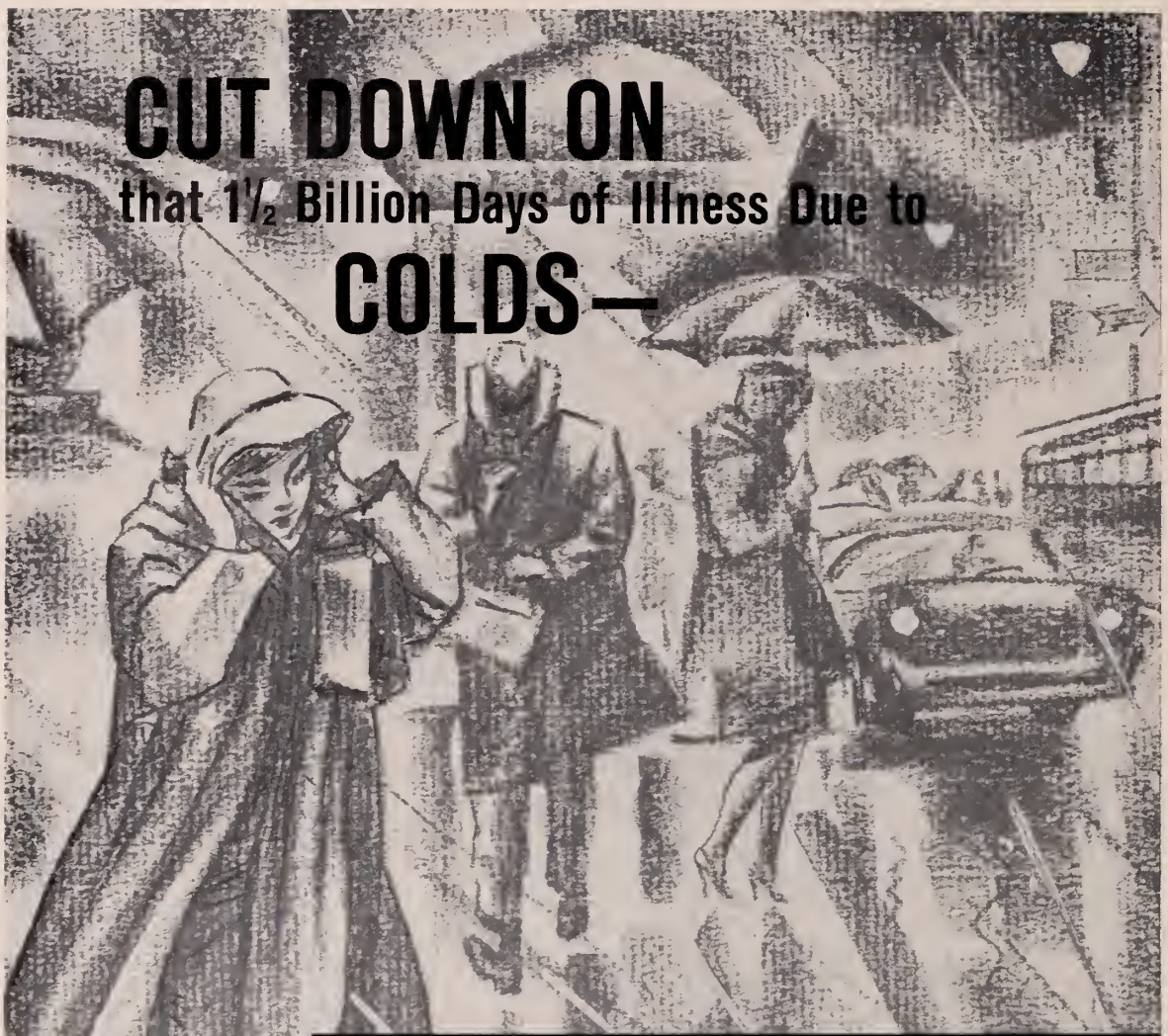
Dosage: 125 mg. or 250 mg. three times daily, depending on the severity of infection. Larger doses (e.g., 500 mg. t.i.d.) may be used for more severe infections. SYNCILLIN may be administered without regard to meals. Beta hemolytic streptococcal infections should be treated with SYNCILLIN for at least ten days.

Precautions: At the present time it is not possible to draw definite conclusions regarding the incidence of allergenicity to SYNCILLIN or its cross-allergenicity with natural penicillins. *Therefore, the usual precautions for oral penicillin therapy should always be observed.* Patients with histories of asthma, hay fever, urticaria, or previous reactions to penicillin should be watched with special care. Administration of oral penicillin, in rare instances, may provoke acute anaphylaxis, particularly in penicillin-sensitive individuals.
Diarrhea has been reported occasionally following heavy dosage. If this occurs, lengthen the interval between dosages.
If superinfection occurs during therapy, appropriate measures should be taken. Since some strains of staphylococci are resistant to SYNCILLIN as well as to other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment. As is true with all antibiotics, clinical response does not always correlate with laboratory bacterial sensitivity reports.

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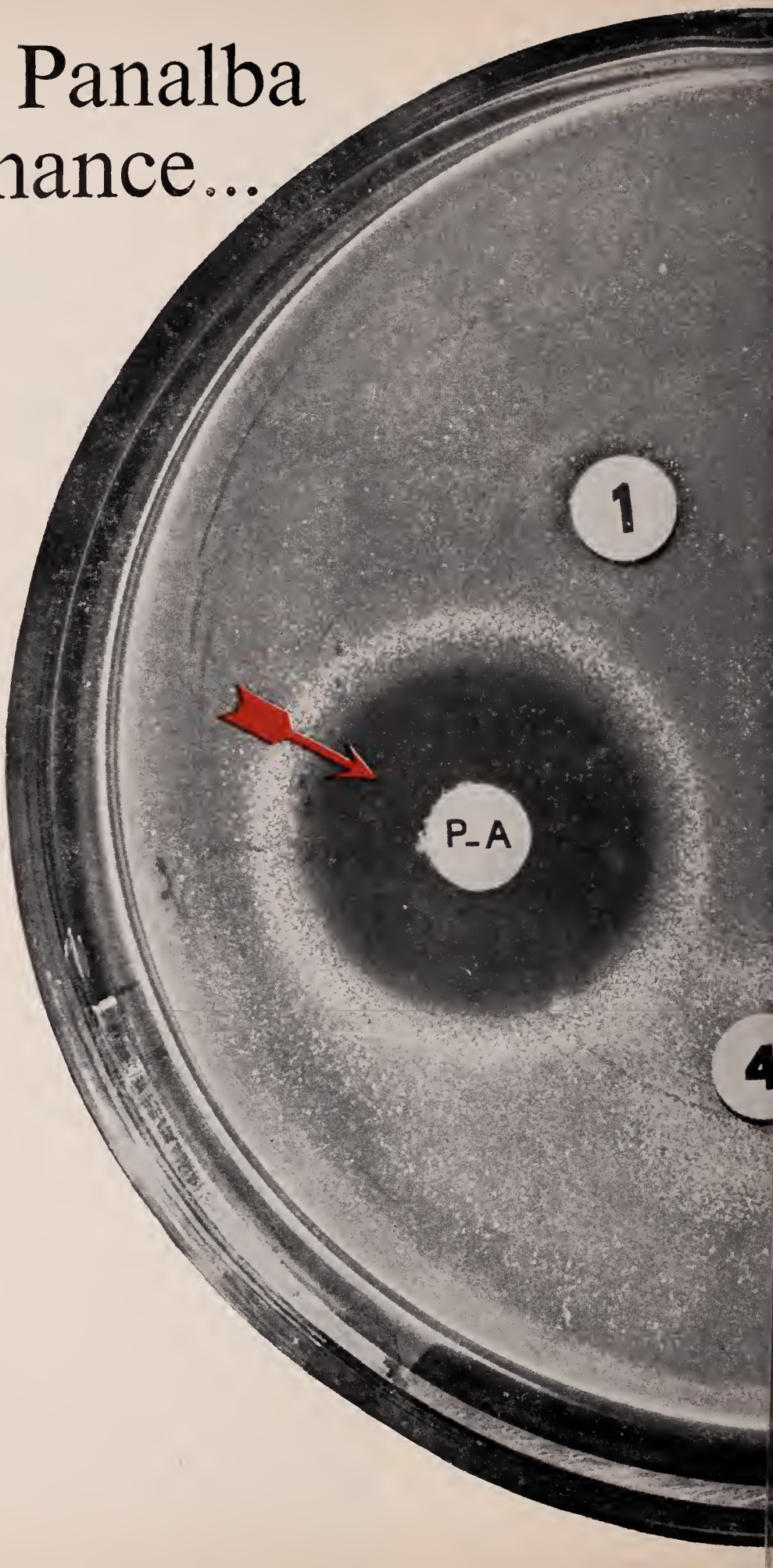
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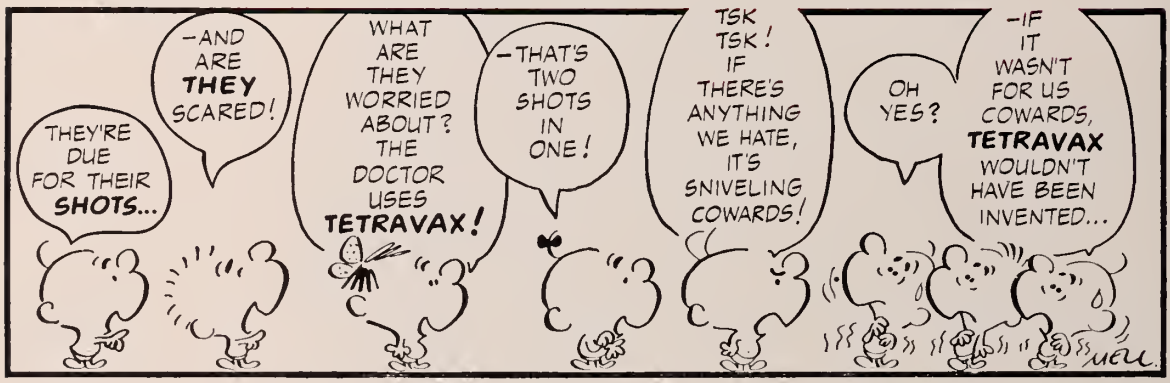
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1. Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933

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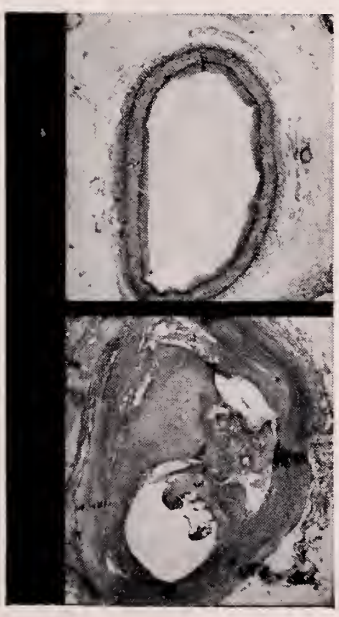
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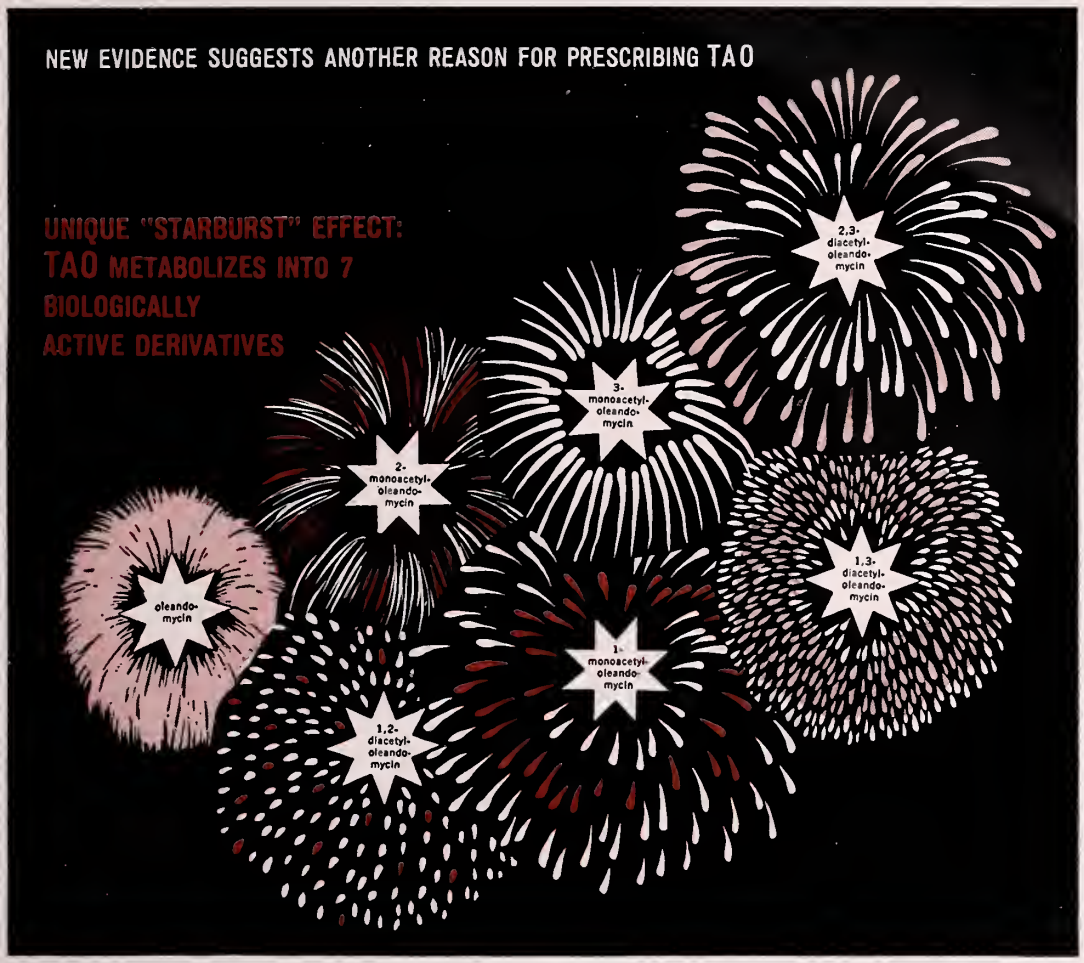
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1. Ford, R. A., and Blanchard, K.: Journal-Lancet 78:185, 1958.

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1. English, A. R., and McBride, T. J.: Proc. Soc. Exper. Biol. & Med. 100:880 (Apr.) 1959. 2. Celmer, W. D.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 277. 3. English, A. R., and Fink, F. C.: Antibiotics & Chemother. 8:420 (Aug.) 1958.

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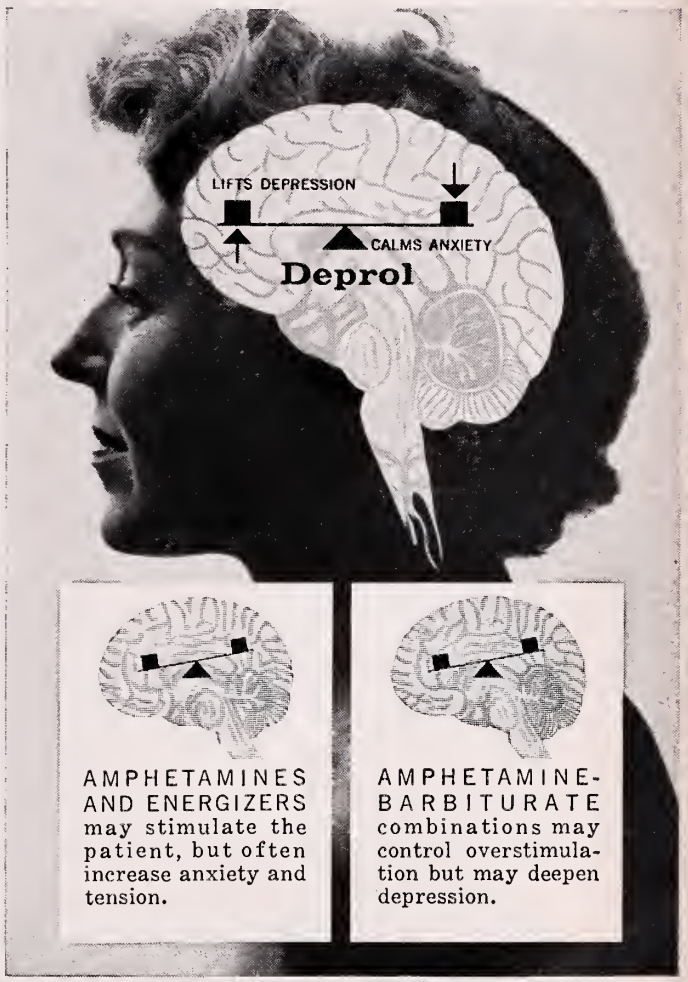
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1. Alexander, L. (35 patients): Chemotherapy of depression – Use of meprobamate combined with benactyzine (2-diethylaminoethyl benzilate) hydrochloride. J.A.M.A. 166:1019, March 1, 1958. **2.** Bateman, J. C. and Carlton, H. M. (50 patients): Meprobamate and benactyzine hydrochloride (Deprol) as adjunctive therapy for patients with advanced cancer. Antibiotic Med. & Clin. Therapy 6:648, Nov. 1959. **3.** Bell, J. L., Tauber, H., Santy, A. and Pulito, F. (77 patients): Treatment of depressive states in office practice. Dis. Nerv. System 20:263, June 1959. **4.** Breitner, C. (31 patients): On mental depressions. Dis. Nerv. System 20:142, (Section Two), May 1959. **5.** McClure, C. W., Papas, P. N., Speare, G. S., Palmer, E., Slattery, J. J., Kanefat, S. H., Henken, B. S., Wood, C. A. and Ceresia, G. B. (128 patients): Treatment of depression–New technics and therapy. Am. Pract. & Digest Treat. 10:1525, Sept. 1959. **6.** Pennington, V. M. (135 patients): Meprobamate-benactyzine (Deprol) in the treatment of chronic brain syndrome, schizophrenia and senility. J. Am. Geriatrics Soc. 7:656, Aug. 1959. **7.** Rickels, K. and Ewing, J. H. (35 patients): Deprol in depressive conditions. Dis. Nerv. System 20:364, (Section One), Aug. 1959. **8.** Ruchworger, A. (87 patients): Use of Deprol (meprobamate combined with benactyzine hydrochloride) in the office treatment of depression. M. Ann. District of Columbia 28:438, Aug. 1959. **9.** Settel, E. (52 patients): Treatment of depression in the elderly with a meprobamate-benactyzine hydrochloride combination. Antibiotic Med. & Clin. Therapy. In press, 1959. **10.** Splitter, S. R. (84 patients): The care of the anxious and the depressed. Submitted for publication, 1959.

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INDEX TO ADVERTISERS

Abbott ---- 52
Ames Company, Inc. ---- Inside Back Cover
Appalachian Hall ---- 57
Brayten ---- 53
Bristol ---- 11-16, 30, 74-75, 76-77
Burroughs Wellcome Co. ---- 61-62
Burton, Frank ---- 73
Canada Dry ---- 72
Ciba ---- 9, 97
Coca-Cola ---- 23
Davies, Rose & Company, Limited ---- 68
Desitin Chemical Company ---- 8
Drug Specialties ---- 79-80
Dyer, David A. ---- 24
Eli Lilly and Company ---- 54
Fesler ---- 18-19
Gill Memorial Eye, Ear and Throat Hospital, Inc. ---- 56
Geigy ---- 42
General Electric ---- 10
Jefferson, A. G. ---- 66
Johnston-Willis Hospital ---- 63
Jones and Vaughan ---- 7
Lederle ---- 20-21, 38-39, 50, 63, 66, 68, 85, 92-93, 96, 98
Mayrand, Inc. ---- 47
Medicine in Virginia ---- 68, 73
Merck Sharp & Dohme ---- 5, 31, 84
Parke, Davis & Company ---- Second Cover-3
People's Service Drug Stores ---- 70
Pfizer Laboratories ---- 34, 51, 81
Pitman-Moore Company ---- 17
Plyler's Nursing Home, Mrs. ---- 58
Raleigh Hotel ---- 96
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital ---- 64
Richmond Hotels Incorporated ---- 67
Riverside Convalescent Home ---- 64
Robins, A. H., Company ---- 35, 89-90
Roerig ---- 28-29, 91
Saint Albans ---- 57
Sanborn Company ---- 69
Sardeau, Inc. ---- 41
Schering ---- 6, 23, 32-33, 65, 67, 72
Schieffelin & Co. ---- 67
Searle ---- 55
Smith-Dorsey ---- 40
Smith Kline & French Laboratories ---- Back Cover
Squibb ---- 36-37, 88
St. Elizabeth's Hospital ---- 58
St. Luke's Hospital ---- 60
St. Paul-Western Insurance Companies ---- 73
State Board of Medical Examiners, The ---- 73
Stuart Circle Hospital ---- 56
Terrace Hill Nursing Home ---- 63
Tilden Company, The ---- 22
Tucker Hospital, Inc. ---- 60
United States Brewers Foundation ---- 71
Upjohn ---- 82-83
U. S. Vitamin Corp. ---- 86-87
Valentine Company, Inc. ---- 65
Wallace Laboratories ---- 25-26, 27, 94-95
Wesson Oil ---- 48-49
White Cross Hospital ---- 59
William Printing Co. ---- 66
Winthrop Laboratories ---- 43-46, 78


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TABLE OF CONTENTS

GUEST EDITORIAL

IBM Medicine—*C. Bruce Morton II, M.D.* ---- 117

ORIGINAL ARTICLES

Chronic Discoid Lupus Erythematosus—*George H. Curtis, M.D.* ---- 119

Factors Influencing Therapy in Peripheral Vascular Disease—*George H. Yeager, M.D.* ---- 127

The Transmission of Early Infectious Syphilis Through Homosexual Practices—*E. Randolph Trice, M.D., Seth Gayle, Jr., M.D.,* and *Frederick A. Clark, Jr., M.D.* ---- 132

Pathways of Disease—*Robert R. Gatling, M.D.* ---- 135

Tobacco Amblyopia—*H. S. Hedges, M.D.* ---- 144

Olfactory Esthesioneuroepithelioma—*Richard E. Palmer, M.D., Adrian J. Delaney, M.D.,* and *Albert Cannon, M.D.* 146

The Problem of Carcinoma of the Gall Bladder—*Thomas G. Hardy, Jr., M.D.* ---- 150

Initial Therapy of the Alcoholic—*N. E. Stratas, M.D.,* and *K. T. Schmidt, M.D.* ---- 154

PRE-PAID MEDICAL CARE

A Step Backward ---- 156

PUBLIC HEALTH

Amebiasis ---- 157

MENTAL HEALTH

Patients' Attitudes Toward Hospital Care ---- 159

BOOK ANNOUNCEMENTS ---- 163

EDITORIAL

Dr. Wyndham Bolling Blanton—*Harry J. Warthen, M.D.* ---- 165

SOCIETY ACTIVITIES ---- 168

NEWS NOTES ---- 168

OBITUARIES ---- 173

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INDEX TO ADVERTISERS—Page 102

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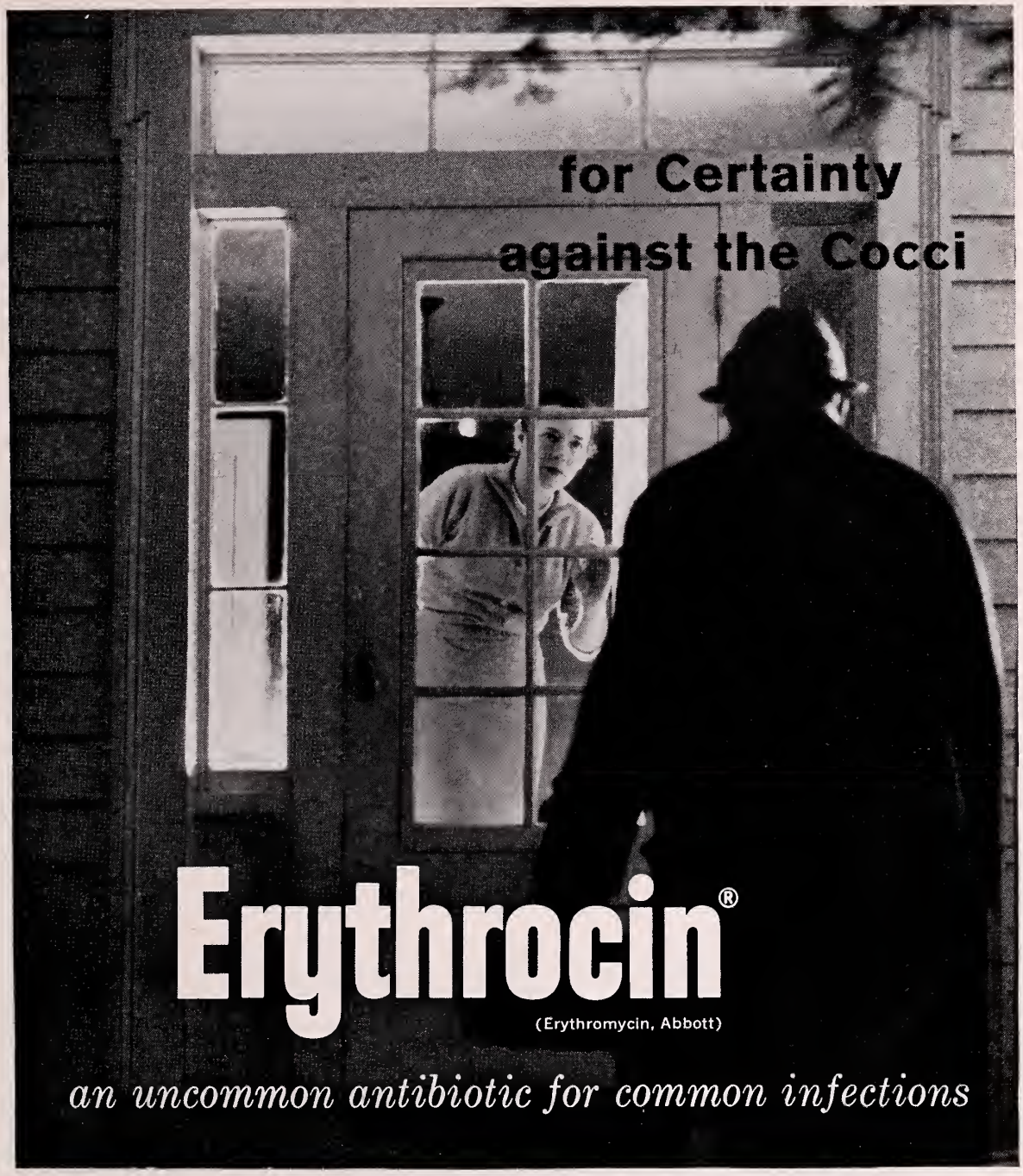
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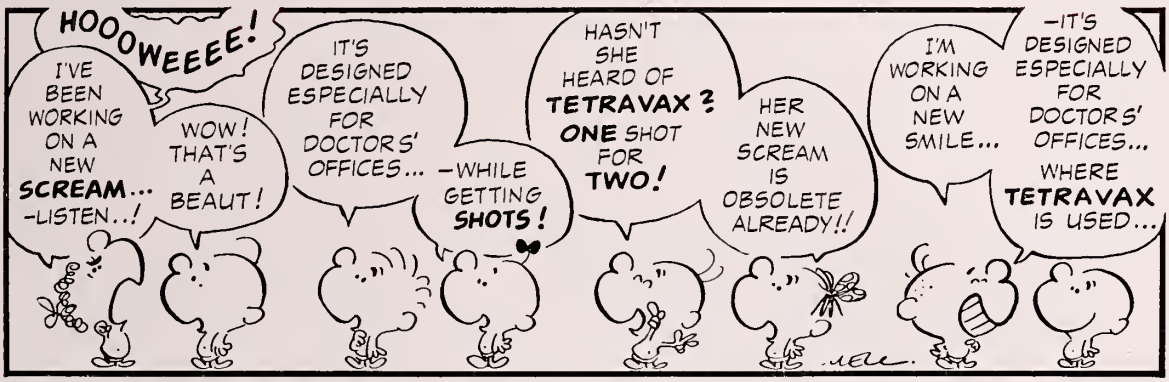
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CONSIDER THESE 6 IMPORTANT THERAPEUTIC ATTRIBUTES OF

SYNCILLIN™



POTASSIUM PENICILLIN-152

ANTIBIOTIC ACTIVITY DIRECTLY PROPORTIONAL TO ORAL DOSE

REDUCED RATE OF INACTIVATION BY STAPH PENICILLINASE

MANY STAPH STRAINS MORE SENSITIVE TO SYNCILLIN IN VITRO

BRISTOL





FOR HIGHLY EFFECTIVE THERAPY OF THE LARGE VARIETY OF INFECTIONS CAUSED BY SUSCEPTIBLE PATHOGENS...NEW

SYNC

Significance of complementary action of isomers in SYNCILLIN

The antibiotic effect of the clinically available mixture, SYNCILLIN, is greater than that of either of its two component isomers alone against many important pathogens, including some penicillin-resistant staphylococci. This phenomenon has been described as *Isomeric Complementarity*.

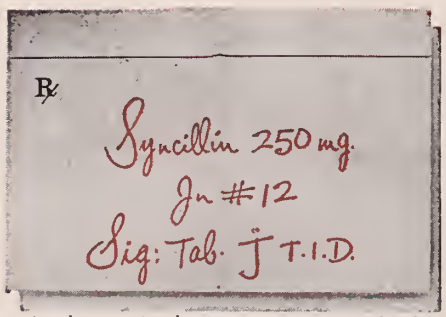
Significance of higher blood levels with SYNCILLIN

Higher blood levels may be of value with organisms of only moderate penicillin sensitivity where doubling the blood concentration may be essential for effective bactericidal action. In addition, these higher levels may be necessary where there is infection in areas with a poor blood supply. Under these circumstances a higher blood concentration may provide the increased diffusion pressure required to deliver adequate amounts to the tissue. Also, antibiotic activity of SYNCILLIN is directly proportional to oral dosage. Increasing the dosage may, therefore, enhance the drug's effectiveness in certain cases.

Efficacy of SYNCILLIN against staphylococci and other resistant organisms

Studies have shown that SYNCILLIN is effective *in vitro* against 60 to 75% of hospital "staph" strains, while penicillin G and penicillin V are now effective against only 30 to 50%.[1, 2] Therefore, if clinical judgment indicates the use of penicillin, SYNCILLIN would be expected to be the most effective. However, since some strains are still resistant to SYNCILLIN as well as to the other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment.

There have recently been reports of decreased efficacy of penicillin in streptococcal[3] and gonococcal[4, 5] infections. The emergence of penicillin-resistant gonococci appears to be associated with an increase in the incidence of gonorrhea all over the world. When a less sensitive strain is encountered the higher blood levels produced by SYNCILLIN may be most helpful.



major therapeutic advantages accompany molecular asymmetry

I L L I N™

Relation of intermittent high blood levels of SYNCILLIN to antibacterial efficacy

SYNCILLIN, like all clinically available penicillins, is bactericidal. Periodic high blood concentrations may be sufficient to permit complete eradication of sensitive pathogens. According to Eagle,[6] "Soon after penicillin attains effective concentrations, the bacteria cease multiplying; and the bacteriostatic effect persists for a number of hours after penicillin has fallen to concentrations that are wholly ineffective. . . . The therapeutic significance of this postpenicillin recovery period is enhanced by the fact that the recovering bacteria, damaged but not killed by the previous exposure to penicillin, are abnormally susceptible to the host defenses. In consequence, the bactericidal process *in vivo* continues for many hours after the drug itself has fallen to ineffective concentrations."

Reduced rate of inactivation of SYNCILLIN by staph penicillinase

Bacterial resistance to penicillin has been attributed to the action of penicillin-inactivating enzymes produced by the invading organisms. SYNCILLIN is less affected by staphylococcal penicillinase than either of its component isomers. Further, SYNCILLIN is shown to be less inactivated by this enzyme than penicillin V or penicillin G. Penicillinase from *B. cereus* likewise inactivates SYNCILLIN less rapidly than penicillin V or G.

Indications: SYNCILLIN is recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci. In addition, SYNCILLIN is effective against certain strains of staphylococci resistant to other penicillins. SYNCILLIN, like other oral penicillins, is not recommended at the present time in deep-seated or chronic infections, subacute bacterial endocarditis, meningitis, or syphilis.

Dosage: 125 mg. or 250 mg. three times daily, depending on the severity of infection. Larger doses (e.g., 500 mg. t.i.d.) may be used for more severe infections. SYNCILLIN may be administered without regard to meals. Beta hemolytic streptococcal infections should be treated with SYNCILLIN for at least ten days.

Precautions: At the present time it is not possible to draw definite conclusions regarding the incidence of allergenicity to SYNCILLIN or its cross-allergenicity with natural penicillins. *Therefore, the usual precautions for oral penicillin therapy should always be observed.* Patients with histories of asthma, hay fever, urticaria, or previous reactions to penicillin should be watched with special care. Administration of oral penicillin, in rare instances, may provoke acute anaphylaxis, particularly in penicillin-sensitive individuals.

Diarrhea has been reported occasionally following heavy dosage. If this occurs, lengthen the interval between dosages.

If superinfection occurs during therapy, appropriate measures should be taken. Since some strains of staphylococci are resistant to SYNCILLIN as well as to other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment. As is true with all antibiotics, clinical response does not always correlate with laboratory bacterial sensitivity reports.

Supply: 125 and 250 mg. tablets, bottles of 25 and 100. 125 mg. powder for oral solution, 60 ml. vials.

References: 1. Wright, W. W.: Microbiology Report to Bristol Laboratories Inc. 2. Morigi, E. M. E.; Wheatley, W. B., and Albright, H.: Paper presented at the Seventh Antibiotic Symposium, November 4-6, 1959, Washington, D.C. 3. Editorial: New England J. Med. **261**:305 (Aug. 6) 1959. 4. King, A.: Lancet **1**:651 (March 29) 1958. 5. Epstein, E.: J.A.M.A. **169**:1055 (March 7) 1959. 6. Eagle, H. and Musselman, A. D.: J. Bact. **58**:475, 1949.

BRISTOL LABORATORIES, Division of Bristol-Myers Company, SYRACUSE, NEW YORK



whenever there is inflammation, swelling, pain

VARIDASE®

STREPTOKINASE-STREPTODORNASE LEDERLE

BUCCAL *Tablets*

conditions for a fast comeback... as in acute hemorrhoids...

SUNDAY, 9 A.M.: VARIDASE for painful thrombotic hemorrhoid. 2:30 P.M.: pain greatly reduced, less swelling and inflammation.

MONDAY: size down to small tab; acute inflammation disappeared.*

VARIDASE activates natural fibrinolytic factors, to limit undesirable inflammatory response and speed healing.

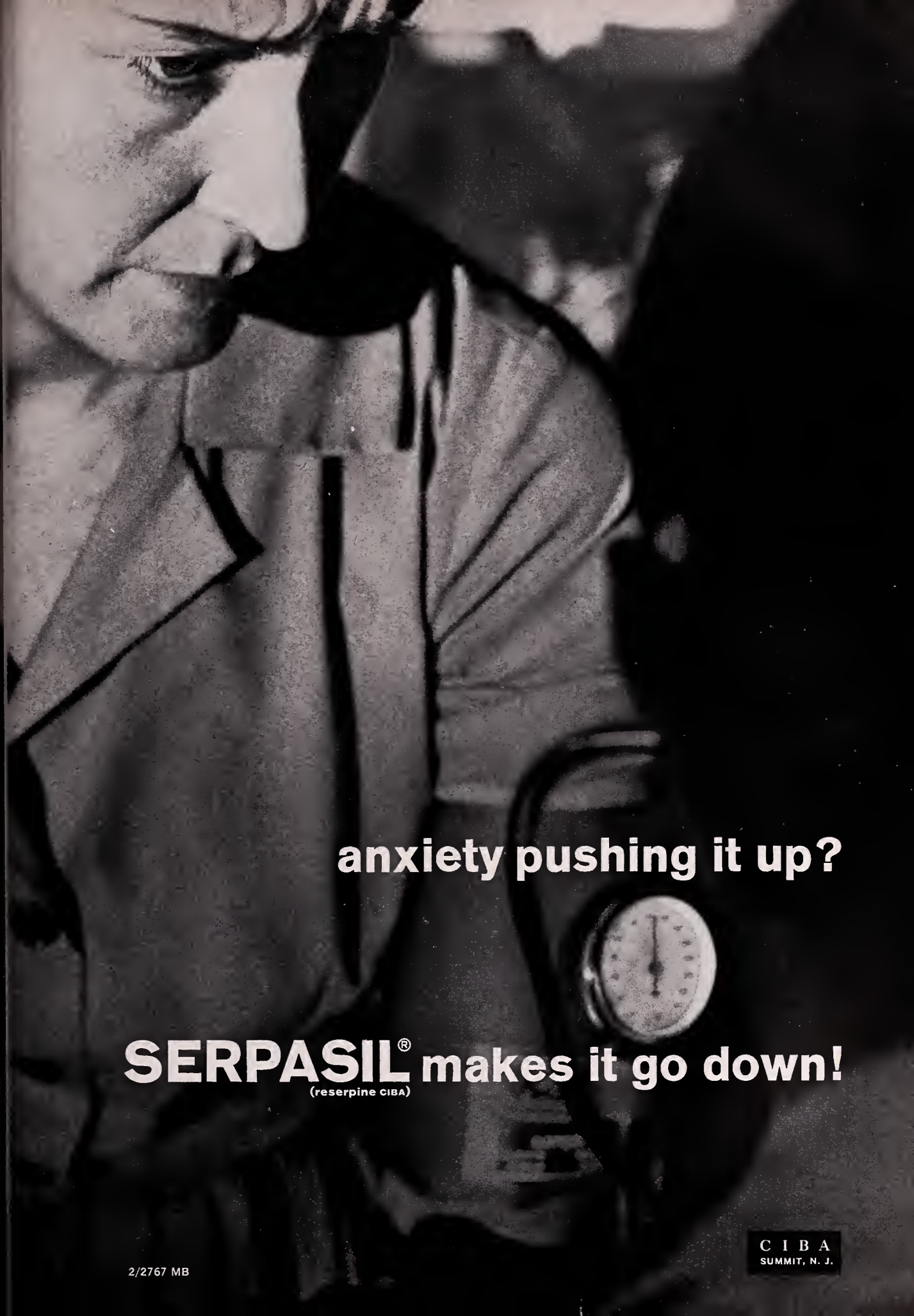
Dramatic reduction of pain is often the first sign of improvement; swelling and redness rapidly diminish. Drugs and natural regenerative factors readily penetrate the inflammatory barrier to effect total remission faster... in trauma or infection.

VARIDASE Buccal Tablets contain:
10,000 Units Streptokinase, 2,500 Units Streptodornase.
Supplied: Boxes of 24 and 100 tablets

*Peterman, R. A.: Clinical report cited with permission.

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a Division of American Cyanamid Company, Pearl River, N. Y.


anxiety pushing it up?
SERPASIL®
(reserpine CIBA)
makes it go down!
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ANADOL

Smooth, Sustained Analgesia



ANADOL

EACH TABLET CONTAINS:

Phenobarbital	¼ gr.
Warning—May be habit forming.	
Acetaminophen	2½ gr.
Salicylamide	3½ gr.
Hyoscyamine Sulfate	0.0004 gr.
Atropine Sulfate	0.00002 gr.
Scopolamine Hydrobromide	0.00008 gr.

ANADOL #2 (Pink)
¼ gr. Codeine

ANADOL #3 (Yellow)
½ gr. Codeine

Anadol Tablets are designed to provide the maximum relief from pain possible without resorting to the opiate drugs. The analgesic effect of Anadol is achieved by a unique combination of acetaminophen and salicylamide. Together they form a team that produces a smooth analgesia lasting longer than either drug would provide alone. The presence of phenobarbital potentiates the analgesic effect and provides a moderate degree of sedation. The central effect of the phenobarbital is augmented by the inclusion of hyoscyamus alkaloids, thus contributing to the allaying of tension which is often a factor to be reckoned with when pain is present in any degree.



SUPPLIED

ANADOL - Bottles of 100 and 1000 tablets

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Ideal New Geriatric Tonic Stimulant

NICOZOL COMPLEX is a cerebral stimulant-tonic and dietary supplement intended for geriatric use. Improves mental and physical well-being. Improves protein and calcium metabolism. Indicated during convalescence, also as a preventive agent in common degenerative changes.

Dosage:

1 teaspoonful (5 cc) 3 times a day, preferably before meals. Female patients should follow each 21-day course with a 7-day rest interval.

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NICOZOL COMPLEX is available as a pleasant-tasting elixir. Popularly priced. Bottles of 1 pint and 1 gallon.

Formula

Each 15 cc (3 teaspoonfuls) contains:

Pentylenetetrazol	150 mg.
Niacin	75 mg.
Methyl Testosterone	2.5 mg.
Ethinyl Estradiol	0.02 mg.
Thiamine Hydrochloride	6 mg.
Riboflavin	3 mg.
Pyridoxine Hydrochloride	6 mg.
Vitamin B-12	2 mcg.
Folic Acid	0.33 mg.
Panthenol	5 mg.
Choline Bitartrate	20 mg.
Inositol	15 mg.
1-Lysine Monohydrochloride	100 mg.
Vitamin E (a-Tocopherol Acetate)	3 mg.
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Trace Minerals as: Iodine 0.05 mg., Magnesium 2 mg., Manganese 1 mg., Cobalt 0.1 mg., Zinc 1 mg.	

Contains 15% Alcohol

Write for professional sample and literature.

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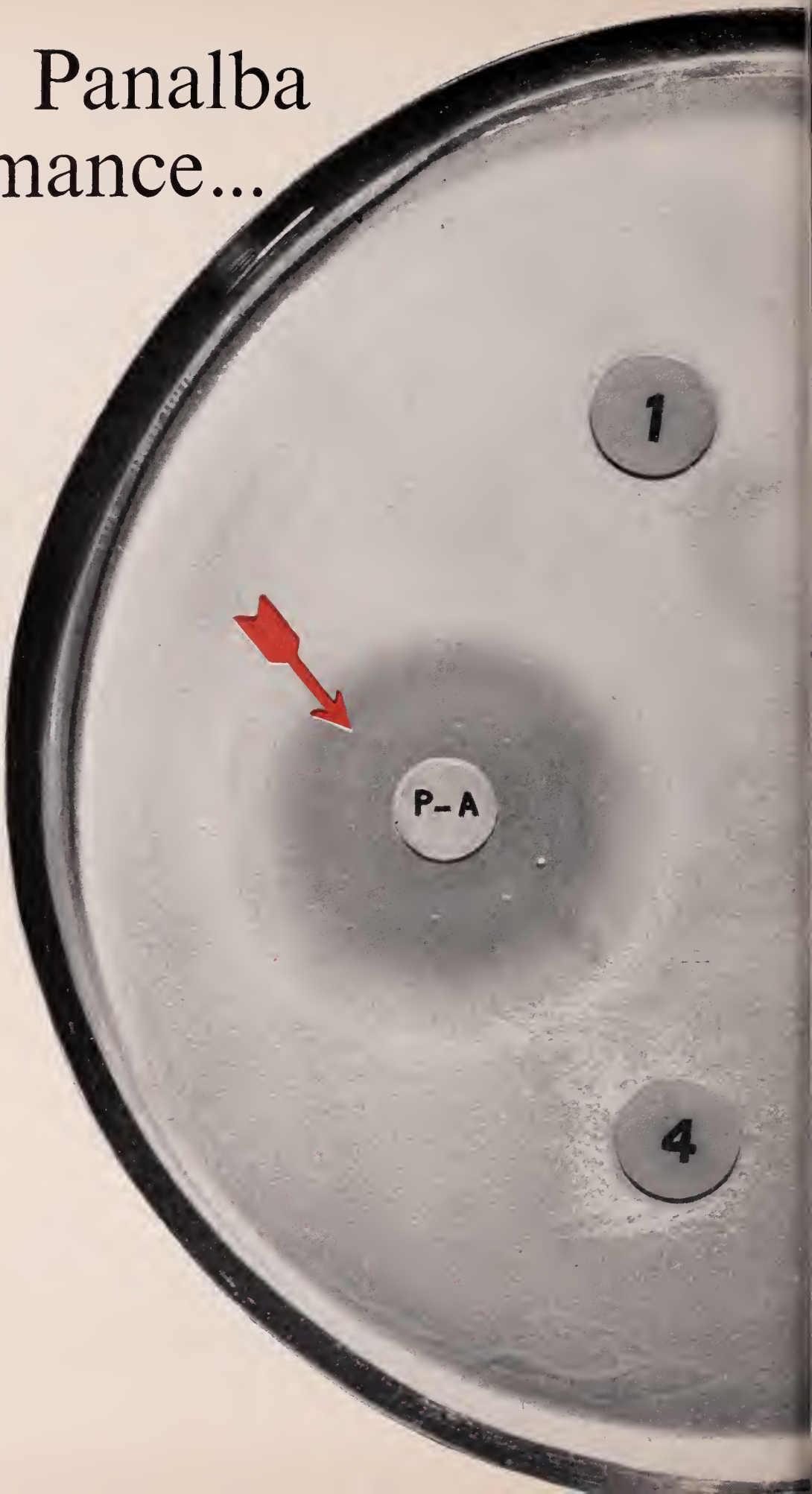
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PAGE 669

This is Panalba performance...





in pneumonia

. . . into a mixed culture of the three organisms commonly involved in pneumonia . . . *K. pneumoniae*, *Diplococcus pneumoniae*, and *Staphylococcus aureus* (in this case a resistant strain) . . . we introduce the five most frequently used antibiotics.

Twenty-four hours later (in this greatly enlarged photograph), note that only *one* of the five leading antibiotics has stopped *all* the organisms, including the resistant staph! This is Panalba.

In your next pneumonia patient . . . in *all* your patients with potentially-serious infections . . . provide this extra protection with your prescription:

Dosage—1 or 2 capsules 3 or 4 times a day.
Supplied—Capsules containing Panmycin phosphate equivalent to 250 mg. tetracycline hydrochloride, and 125 mg. Albamycin as novobiocin sodium, in bottles of 16 and 100.
Now available: new Panalba Half-Strength Capsules in bottles of 16 and 100.

Panalba*

(Panmycin* Phosphate plus Albamycin*)

The broad-spectrum antibiotic of *first* resort



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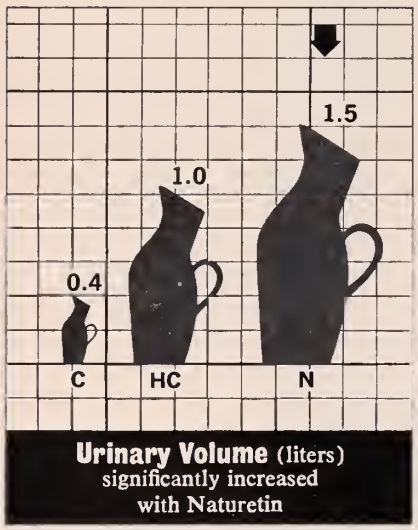
more closely approaches the ideal diuretic

Naturētin

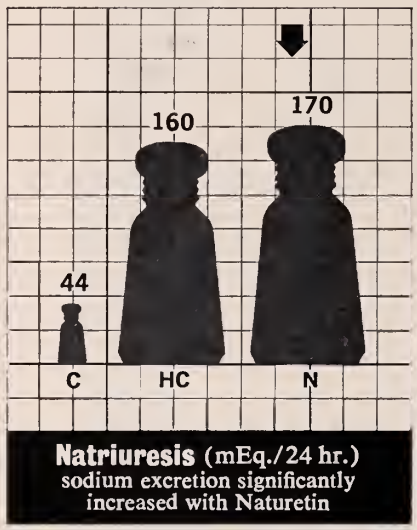
Squibb Benzydroflumethiazide

"When compared to other members of this heterocyclic group of compounds, this drug [NATURETIN] shows a significantly increased natriuresis and decreased loss of potassium and bicarbonate. In this respect it more closely approaches a natural or 'ideal diuretic.' It is effective upon continuous administration and causes no significant serum biochemical changes. It is effective in a wide variety of edematous and hypertensive states and represents a significant advance in diuretic therapy." *Ford, R.V.: Pharmacological observations on a more potent benzothiadiazine diuretic; accepted for publication by the American Heart Journal.*

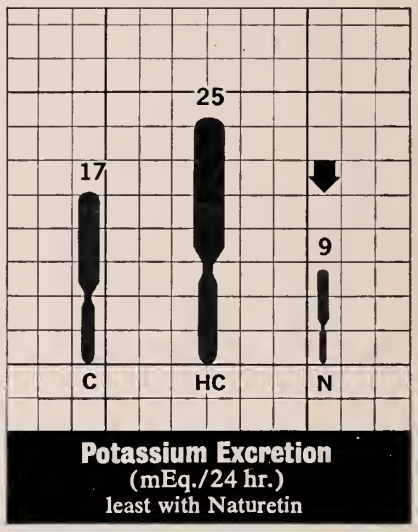
Comparison of electrolyte excretion pattern for the 24 hours following typical doses of chlorothiazide, hydrochlorothiazide, and Naturetin[1]



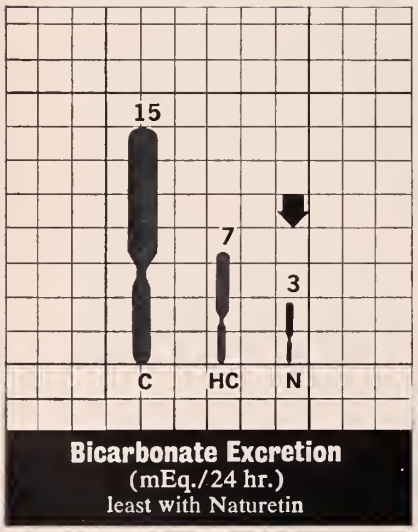
Urinary Volume (liters)
significantly increased
with Naturetin



Natriuresis (mEq./24 hr.)
sodium excretion significantly
increased with Naturetin



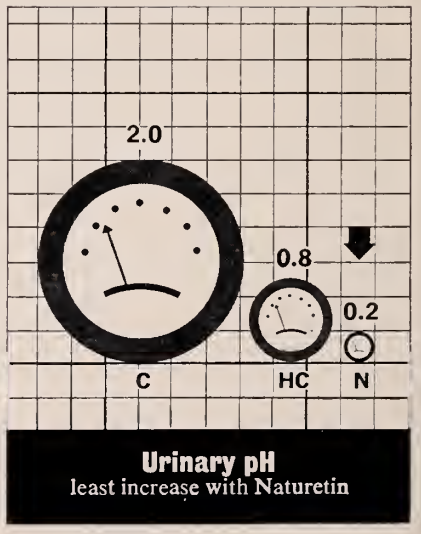
Potassium Excretion
(mEq./24 hr.)
least with Naturetin



Bicarbonate Excretion
(mEq./24 hr.)
least with Naturetin



Chloride Excretion
(mEq./24 hr.)
marked increases



Urinary pH
least increase with Naturetin

Typical Doses: Chlorothiazide—1,000 mg.; Hydrochlorothiazide—50 mg.; Naturetin (Benzydroflumethiazide)—5 mg.

A single 5 mg. tablet once a day provides all these advantages[2]

- prolonged action — in excess of 18 hours
- convenient once-a-day dosage
- low daily dosage — more economical for the patient
- no significant alteration in normal electrolyte excretion pattern
- repetitively effective as a diuretic and antihypertensive
- greater potency mg. for mg.—more than 100 times as potent as chlorothiazide
- potency maintained with continued administration
- low toxicity — few side effects — low salt diets not necessary
- comparative studies with chlorothiazide, hydrochlorothiazide, and Naturetin disclose that smallest doses of Naturetin produce greater weight loss per day
- in hypertension, Naturetin, alone or in combination with other antihypertensives, produces significant decreases in mean blood pressure and other favorable clinical effects
- purpura and agranulocytosis not observed
- allergic reactions rarely observed

[2]Reports (1959) to the Squibb Institute for Medical Research.

Naturētin —*Indications:* in control of edema when diuresis is required, in congestive heart failure, in the premenstrual syndrome, nephrosis and nephritis, cirrhosis with ascites, edema induced by drugs (certain steroids); in the management of hypertension, used alone, combined with Raudixin (Squibb Rauwolfia Serpentina Whole Root), or with other antihypertensive drugs, such as ganglionic blocking agents.

Contraindications: none, except in complete renal shutdown.

Precautions: when Naturetin is added to an antihypertensive regimen including hydralazine, veratrum, and/or ganglionic blocking agents, immediate reduction must be made in the dosage for all preparations; the dosage for ganglionic blocking agents must be decreased by 50% to avoid a precipitous drop in blood pressure. This also applies if these hypotensive drugs are added to an established Naturetin regimen . . . in hypochloremic alkalosis with or without hypokalemia . . . in cirrhotic patients or those on digitalis therapy when reductions in serum potassium are noted . . . in diabetic patients or those predisposed to diabetes . . . when increased uric acid concentrations are noted . . . when signs—leg or abdominal cramps, pruritus, paresthesia, rash—suggestive of hypersensitivity, are noted.

Naturētin —*Dosage: in edema,* average dose, 5 mg., once daily, preferably in the morning; to initiate therapy, up to 20 mg., once daily or in divided doses; for maintenance, 2.5 to 5.0 mg., daily in a single dose. *In hypertension:* suggested initial dose, 5 to 20 mg. daily; for maintenance, 2.5 to 15 mg. daily, depending on the individual response of the patient. When Naturetin is added to an antihypertensive regimen with other agents, lower maintenance doses of each drug should be used.

Naturētin —*Supplied:* tablets of 2.5 mg. and 5 mg. (scored).

SQUIBB



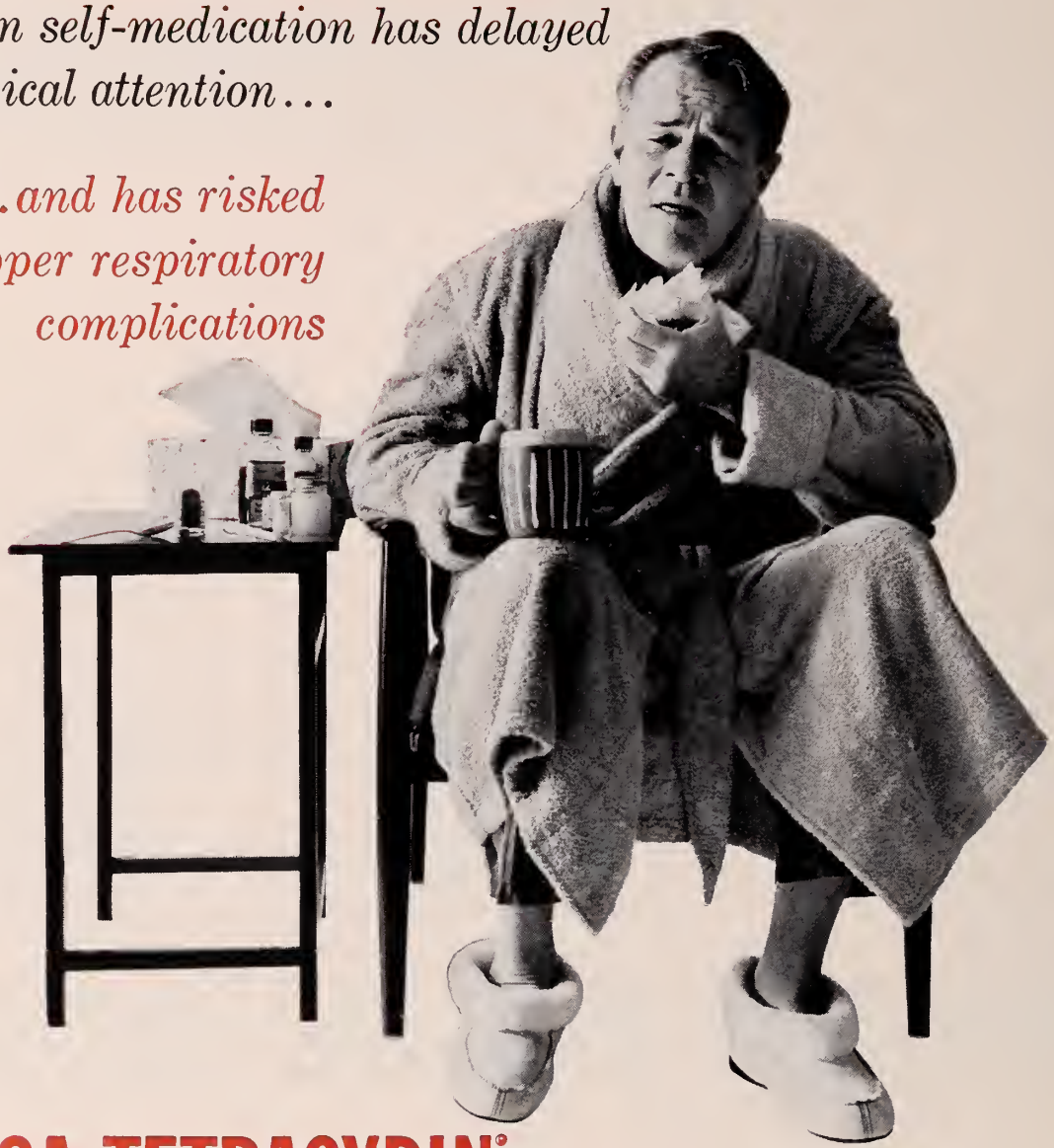
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morning

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in the **"COMMON COLD"**
when self-medication has delayed medical attention...

...and has risked upper respiratory complications



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Cosa-Tetracyn® — analgesic — antihistamine compound

act quickly to

- *control secondary infection*
- *alleviate cold symptoms*

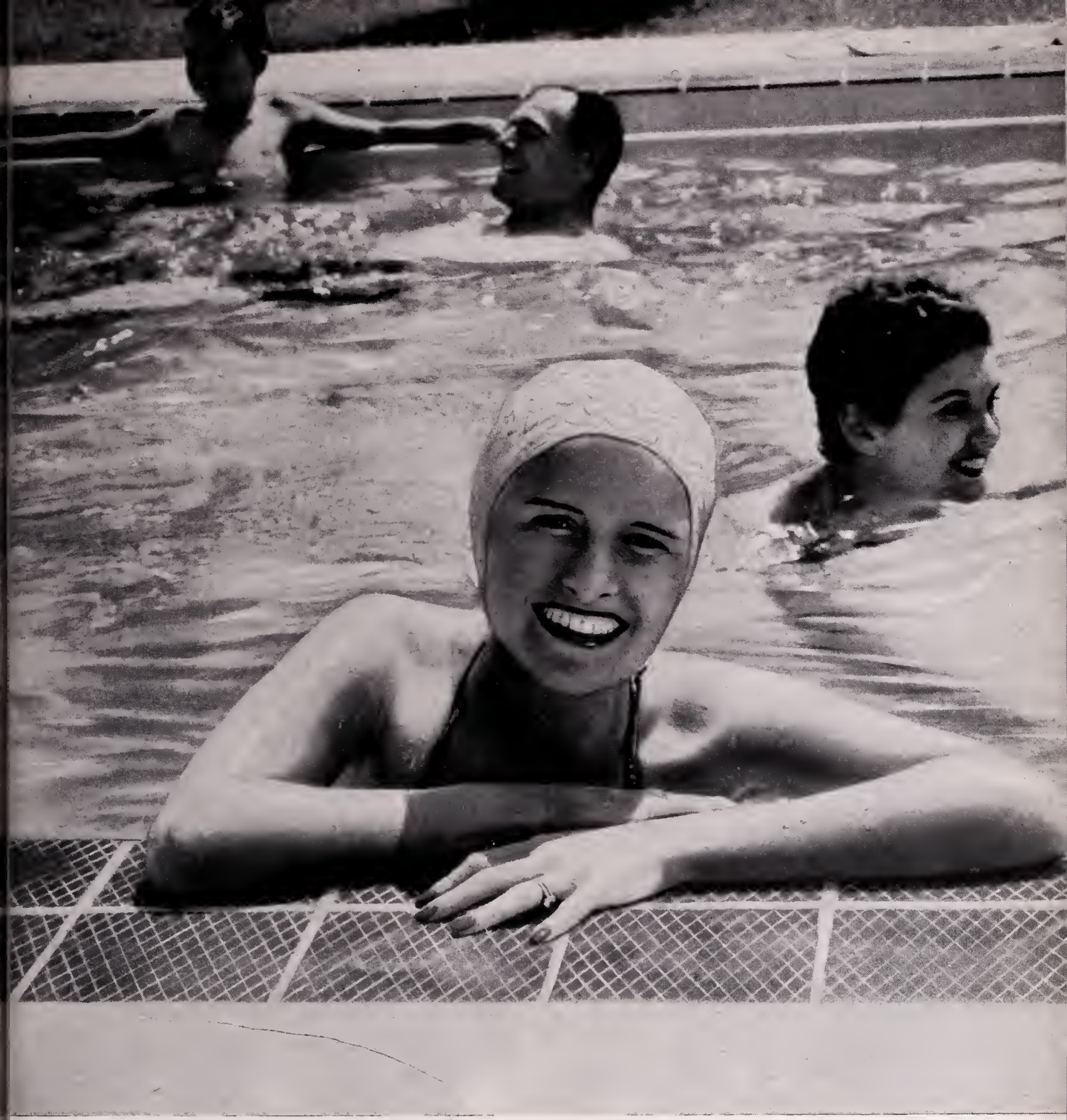
each capsule contains:

Cosa-Tetracyn	125 mg.
phenacetin	120 mg.
caffeine	30 mg.
salicylamide	150 mg.
buclizine HCl	15 mg.

average adult dose: 2 capsules q. i. d.

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THERAPY for the menopause syndrome should relieve not only the psychic instability attendant the condition, but the vasomotor instability of estrogen decline as well. Though they would have a hard time explaining it in such medical terms, this is the reason women like "Premarin."

The patient isn't alone in her devotion to this natural estrogen. Doctors, husbands, and family all like what it does for the patient, the wife, and the homemaker.

When, because of the menopause, the psyche needs nursing—"Premarin" nurses. When hot flushes need suppressing, "Premarin" suppresses. In short, when you want to treat the whole menopause, (and how else is it to be treated?), let your choice be "Premarin," a complete natural estrogen complex.

"Premarin," conjugated estrogens (equine), is available as tablets and liquid, and also in combination with meprobamate or methyltestosterone.

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Lifts depression...



You see an improvement within a few days
Thanks to your prompt treatment and the quick, smooth action of Deprol, her depression is relieved and her anxiety and tension calmed – *often in a few days.* She eats well, sleeps well and soon returns to her normal activities.

as it calms anxiety!

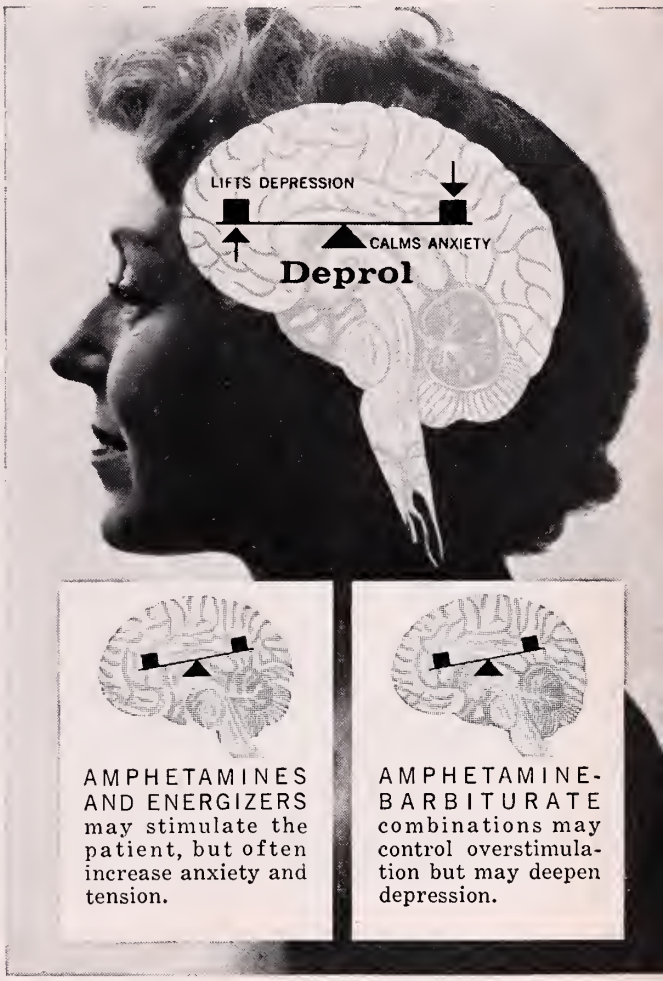
Smooth, balanced action lifts depression as it calms anxiety... swiftly and safely

Balances the mood — no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient — *they often aggravate anxiety and tension.* And although amphetamine-barbiturate combinations may counteract excessive stimulation — *they often deepen depression.*

In contrast to such "seesaw" effects, Deprol lifts depression as it calms anxiety — both at the same time.

Acts swiftly — the patient often feels better within a few days. Unlike the delayed action of other drugs which may take two to six weeks to bring results, Deprol's smooth, immediate action relieves the patient quickly — often within a few days.

Acts safely — no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function — frequently reported with other drugs.



BIBLIOGRAPHY *(10 clinical studies, 714 patients)*:

1. Alexander, L. (35 patients): Chemotherapy of depression — Use of meprobamate combined with benactyzine (2-diethylaminoethyl benzilate) hydrochloride. J.A.M.A. 166:1019, March 1, 1958. **2.** Bateman, J. C. and Carlton, H. M. (50 patients): Meprobamate and benactyzine hydrochloride (Deprol) as adjunctive therapy for patients with advanced cancer. Antibiotic Med. & Clin. Therapy 6:648, Nov. 1959. **3.** Bell, J. L., Tauber, H., Santy, A. and Pulito, F. (77 patients): Treatment of depressive states in office practice. Dis. Nerv. System 20:263, June 1959. **4.** Breitner, C. (31 patients): On mental depressions. Dis. Nerv. System 20:142, (Section Two), May 1959. **5.** McClure, C. W., Papas, P. N., Speare, G. S., Palmer, E., Slattery, J. J., Kanefal, S. H., Henken, B. S., Wood, C. A. and Ceresia, G. B. (128 patients): Treatment of depression—New technics and therapy. Am. Pract. & Digest Treat. 10:1525, Sept. 1959. **6.** Pennington, V. M. (135 patients): Meprobamate-benactyzine (Deprol) in the treatment of chronic brain syndrome, schizophrenia and senility. J. Am. Geriatrics Soc. 7:656, Aug. 1959. **7.** Rickels, K. and Ewing, J. H. (35 patients): Deprol in depressive conditions. Dis. Nerv. System 20:364, (Section One), Aug. 1959. **8.** Ruchwarger, A. (87 patients): Use of Deprol (meprobamate combined with benactyzine hydrochloride) in the office treatment of depression. M. Ann. District of Columbia 28:438, Aug. 1959. **9.** Settel, E. (52 patients): Treatment of depression in the elderly with a meprobamate-benactyzine hydrochloride combination. Antibiotic Med. & Clin. Therapy. In press, 1959. **10.** Splitter, S. R. (84 patients): The care of the anxious and the depressed. Submitted for publication, 1959.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.

Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.

Deprol®

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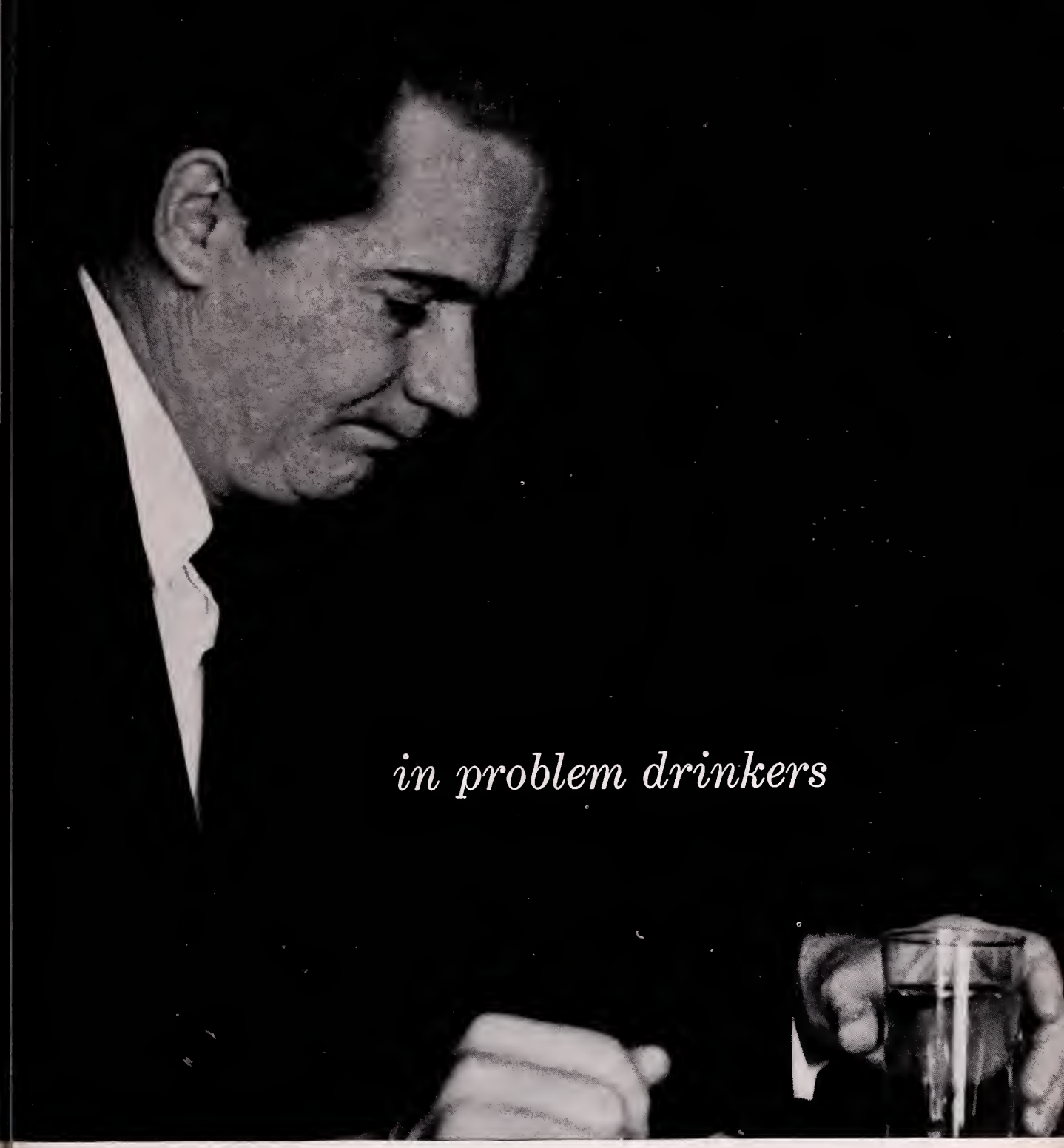
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SQUIBB VITAMIN-MINERAL SUPPLEMENT
calling for just one tablet per day will carry her through term to the six-week postpartum check-up. Thus, you help to assure a nutritionally perfect pregnancy, while providing the convenience and economy of the re-usable Term-Pak. Engran is also available in bottles of 100 tablets.

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hydroxyzine pamoate

dispels tension...
maintains tranquility

When tension and anxiety "drive him to drink," the problem drinker often finds that VISTARIL, by maintaining tranquility, restores perspective and helps him accept counsel more readily.

VISTARIL has demonstrated a wide margin of safety even in large doses (300-400 mg. daily) over prolonged periods. Clinical studies of alcoholism have shown that VISTARIL produces no significant depression of blood pressure, pulse rate, or respiration in chronic drinkers.

Capsules—25, 50, and 100 mg. *Parenteral Solution* (as the HCl)—25 mg. per cc., 10 cc. vials and 2 cc. Steraject® Cartridges; 50 mg. per cc., 2 cc. ampules.

Professional literature available on request from the Medical Department, Pfizer Laboratories, Div., Chas. Pfizer & Co., Inc., Brooklyn 6, New York

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When bad digestion is the consequence of digestive enzyme deficiency, Entozyme may dispel dreary symptoms such as pyrosis, flatulence, belching, and nausea, for it is a natural supplement to digestive enzymes. It provides components with digestive enzyme activity: **Pepsin,** N. F., 250 mg., **Pancreatin,** N. F., 300 mg., and **Bile Salts,** 150 mg. Because Entozyme is actually a tablet-within-a-tablet, these components are freed in the physiological areas where they occur naturally. Entozyme has proved useful in relieving many symptoms associated with cholecystitis, post-cholecystectomy syndrome, sub-total gastrectomy, pancreatitis, infectious hepatitis, and a variety of metabolic diseases.

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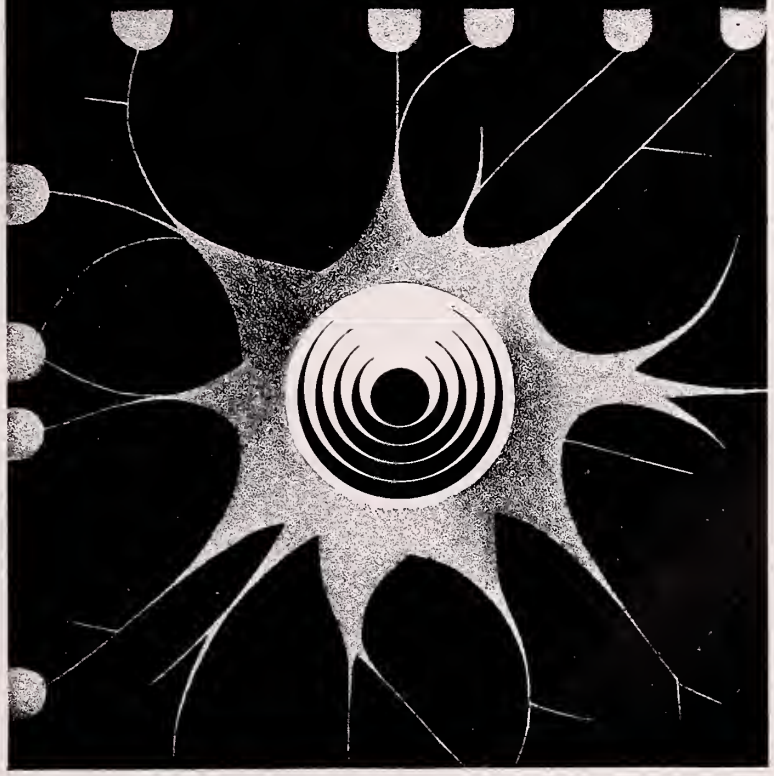
ENTOZYME®

Tofrānil®

brand of imipramine HCl

in depression

lights the road to recovery
in 80 per cent of cases



In the treatment of depression Tofrānil has established the remarkable record of producing remission or improvement in approximately 80 per cent of cases.[1-7]

Tofrānil is well tolerated in usage—is adaptable to either office or hospital practice—is administrable by either oral or intramuscular routes.

Tofrānil
a potent thymoleptic . . .
not a MAO inhibitor.

Does act effectively in *all* types of depression regardless of severity or chronicity.

Does not inhibit monoamine oxidase in brain or liver; produce CNS stimulation; or potentiate other drugs such as barbiturates and alcohol.

Detailed Literature Available on Request.

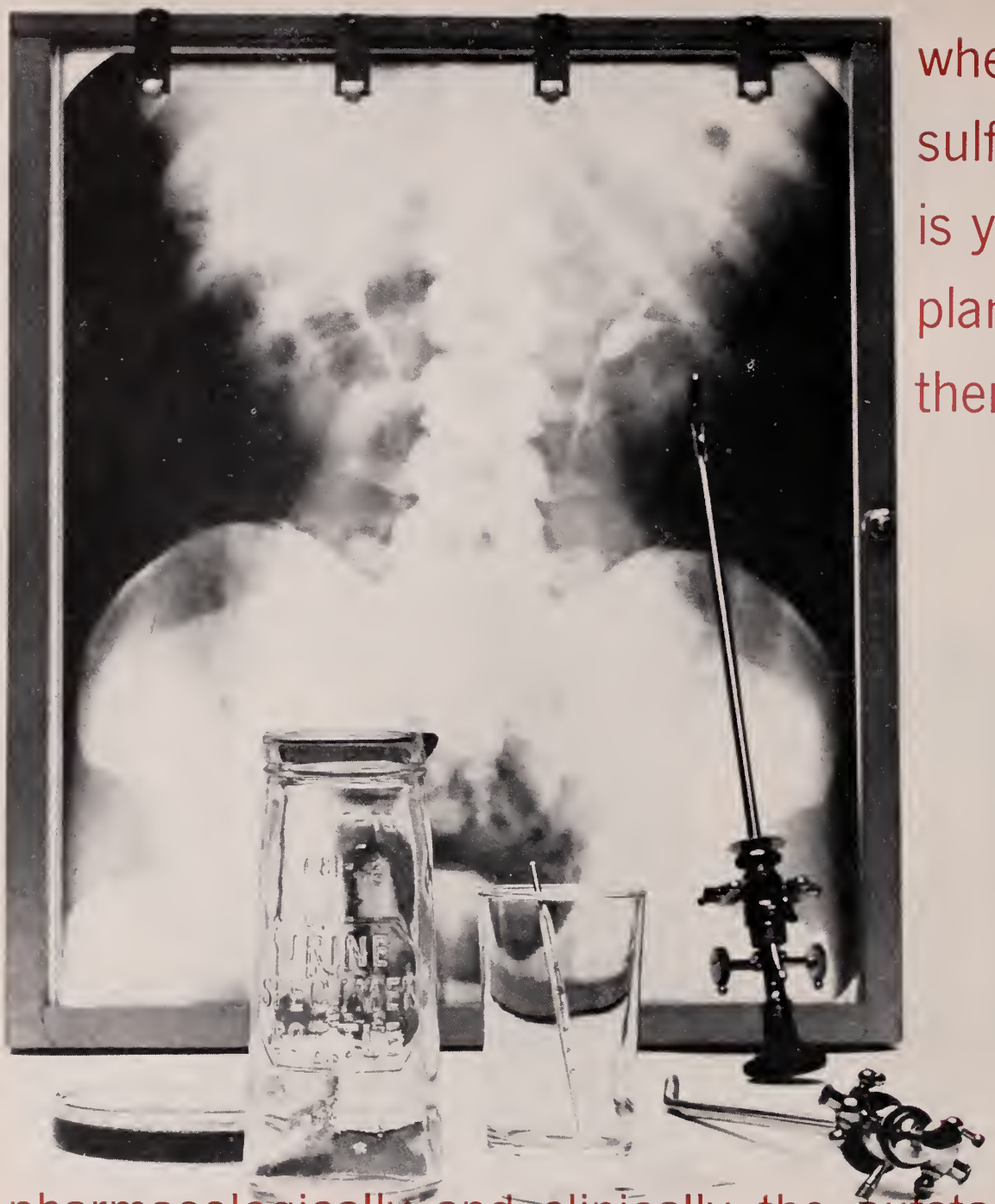
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References: 1. Ayd, F. J., Jr.: Bull. School Med., Univ. Maryland *44*:29, 1959. 2. Azima, H., and Vispo, R. H.: A.M.A. Arch. Neurol. & Psychiat. *81*:658, 1959. 3. Lehmann, H. E.; Cahn, C. H., and de Verteuil, R. L.: Canad. Psychiat. A. J. *3*:155, 1958. 4. Mann, A. M. and MacPherson, A. S.: Canad. Psychiat. A. J. *4*:38, 1959. 5. Sloane, R. B.; Habib, A., and Batt, U. E.: Canad. M.A.J. *80*:540, 1959. 6. Straker, M.: Canad. M.A.J. *80*:546, 1959. 7. Strauss, H.: New York J. Med. *59*:2906, 1959.

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1. Boger, W. P.; Strickland, C. S., and Gylfe, J. M.: Antibiotic Med. & Clin. Ther. 3:378, (Nov.) 1956. 2. Boger, W. P.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 48. 3. Sheth, U. K.; Kulkarni, B. S., and Kamath, P. G.: Antibiotic Med. & Clin. Ther. 5:604 (Oct.) 1958. 4. Vinnicombe, J.: Ibid. 5:474 (July) 1958. 5. Anderson, P. C., and Wissinger, H. A.: U. S. Armed Forces M. J. 10:1051 (Sept.) 1959. 6. Roepke, R. R.; Maren, T. H., and Mayer, E.: Ann. New York Acad. Sc. 60:457 (Oct.) 1957.



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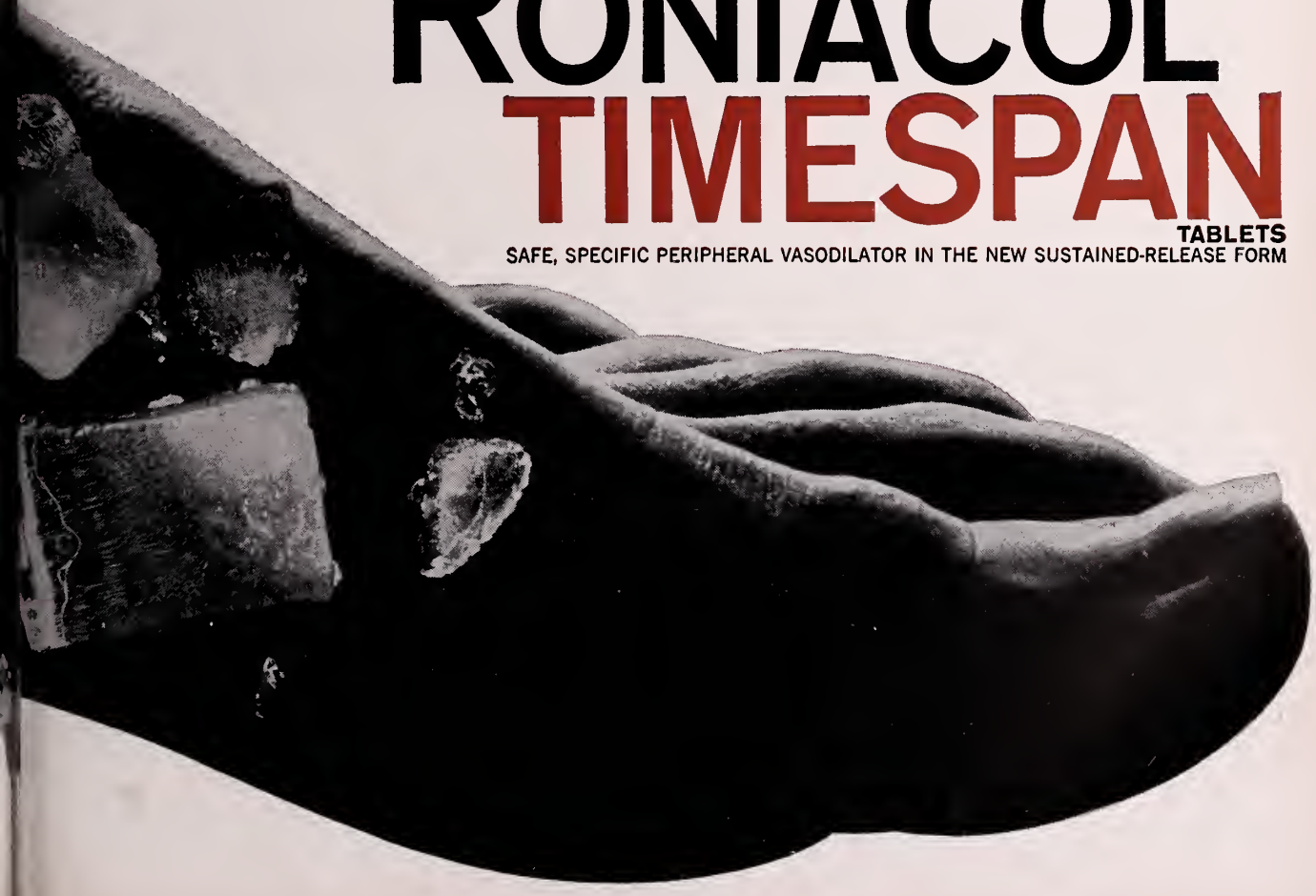
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REFERENCES: 1. Reports on File, Roche Laboratories. 2. W. D. Westinghouse, Personal Communication. 3. E. C. Texter, et al., Am. J. M. Sc., 224:408, 1952. 4. M. M. Fisher and H. E. Tebrock, New York J. Med., 53:65, 1953. 5. I. H. Richter, et al., New York J. Med., 51:1303, 1951. 6. C. M. Castro and L. De Soldati, Angiology, 4:165, 1953. 7. R. M. N. Crosby, Am. J. M. Sc., 225:61, 1953. 8. J. Dosdos and G. E. Arnold, Eye Ear Nose & Throat Month., 38:1035, 1959.
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1. Goodman, L.S. and Gilman, A.: The Pharmacological Basis of Therapeutics, 2nd Ed., Macmillan & Co., New York (1955).

2. Roberts, E.: Four Year Evaluation of an Antihypertensive Agent, J. Am. Med. Women's Assn. *13*:349 (1958).

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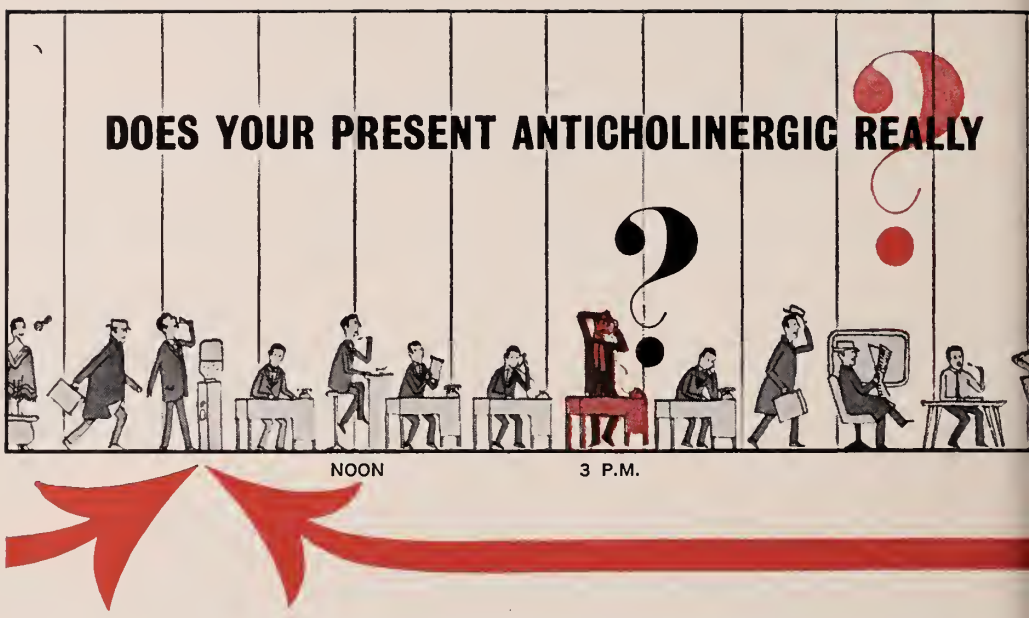
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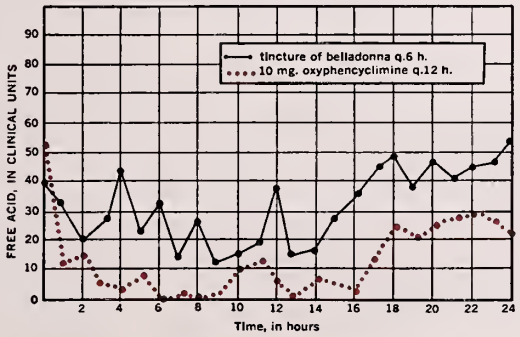
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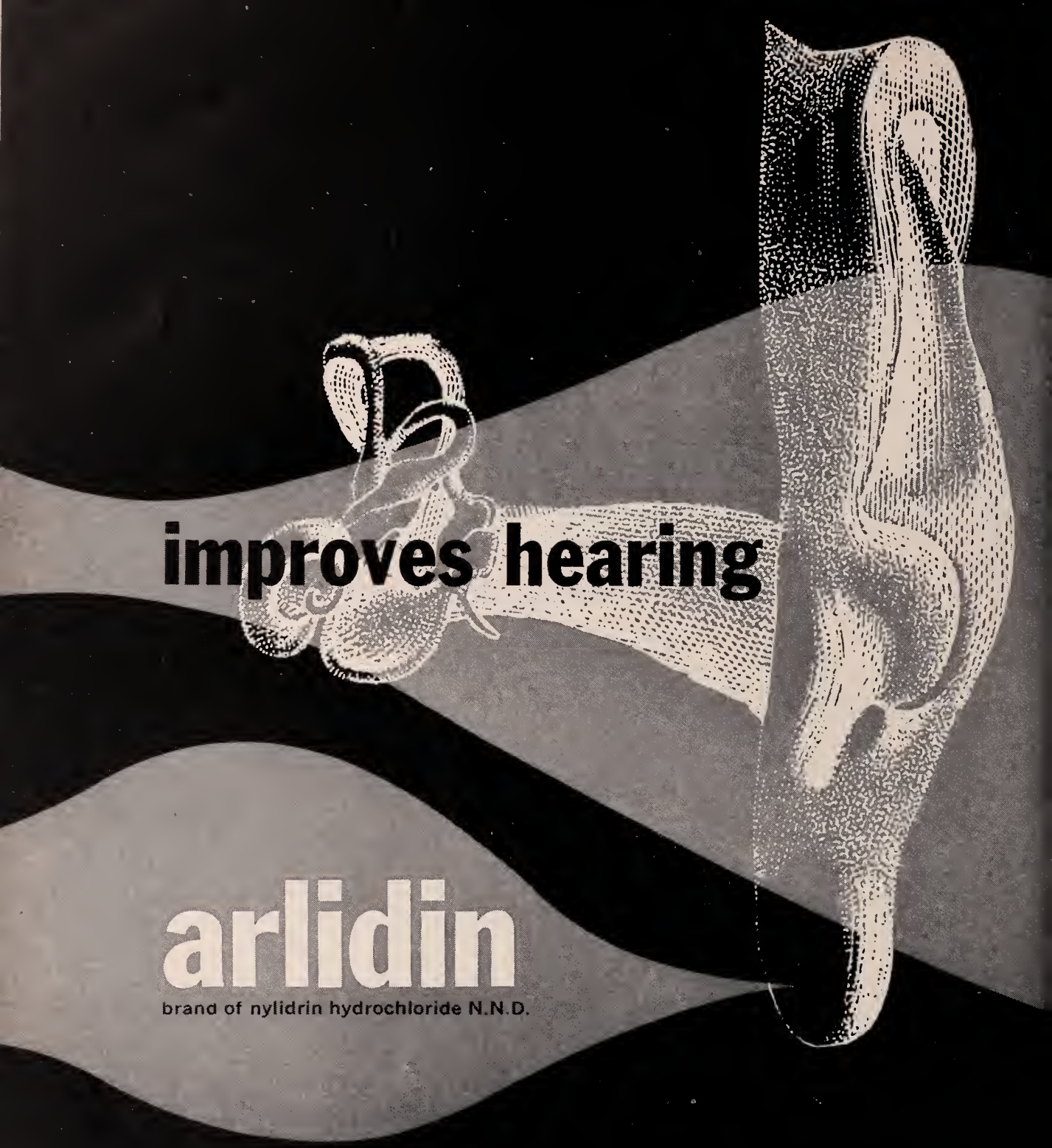
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References: 1. McHardy, G., et al.: J. Louisiana M. Soc. 111:290 (Aug.) 1959. 2. Steigmann, F.: Study conducted at Cook County Hospital, Chicago, Illinois, in press. 3. Kemp, J. A.: Antibiotic Med. & Clin. Therapy 6:534 (Sept.) 1959. 4. Leming, B. H., Jr.: Clin. Med. 6:423 (Mar.) 1959. 5. Data in Roerig Medical Department files.

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1. Rubin, W., and Anderson, J. R.: Angiology, Oct. 1958.

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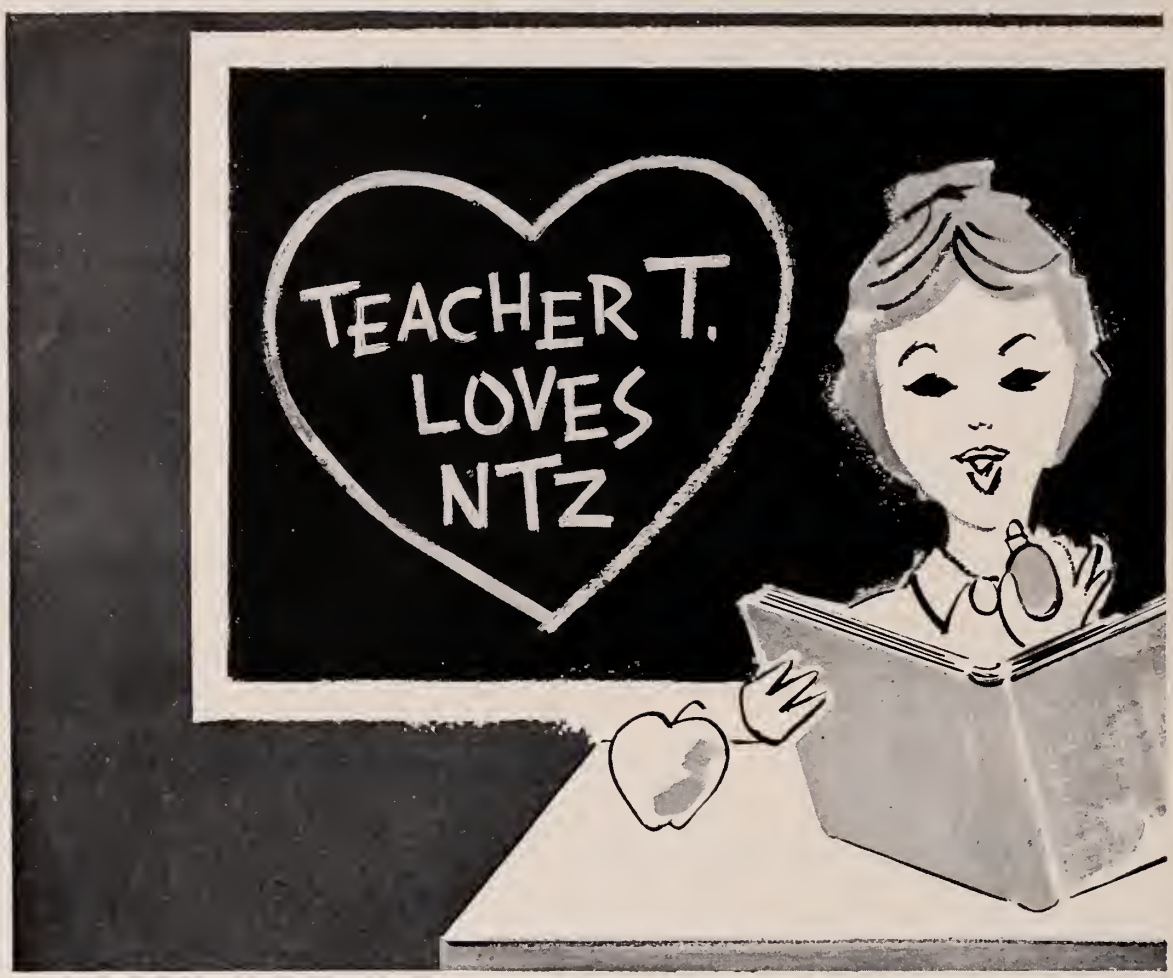
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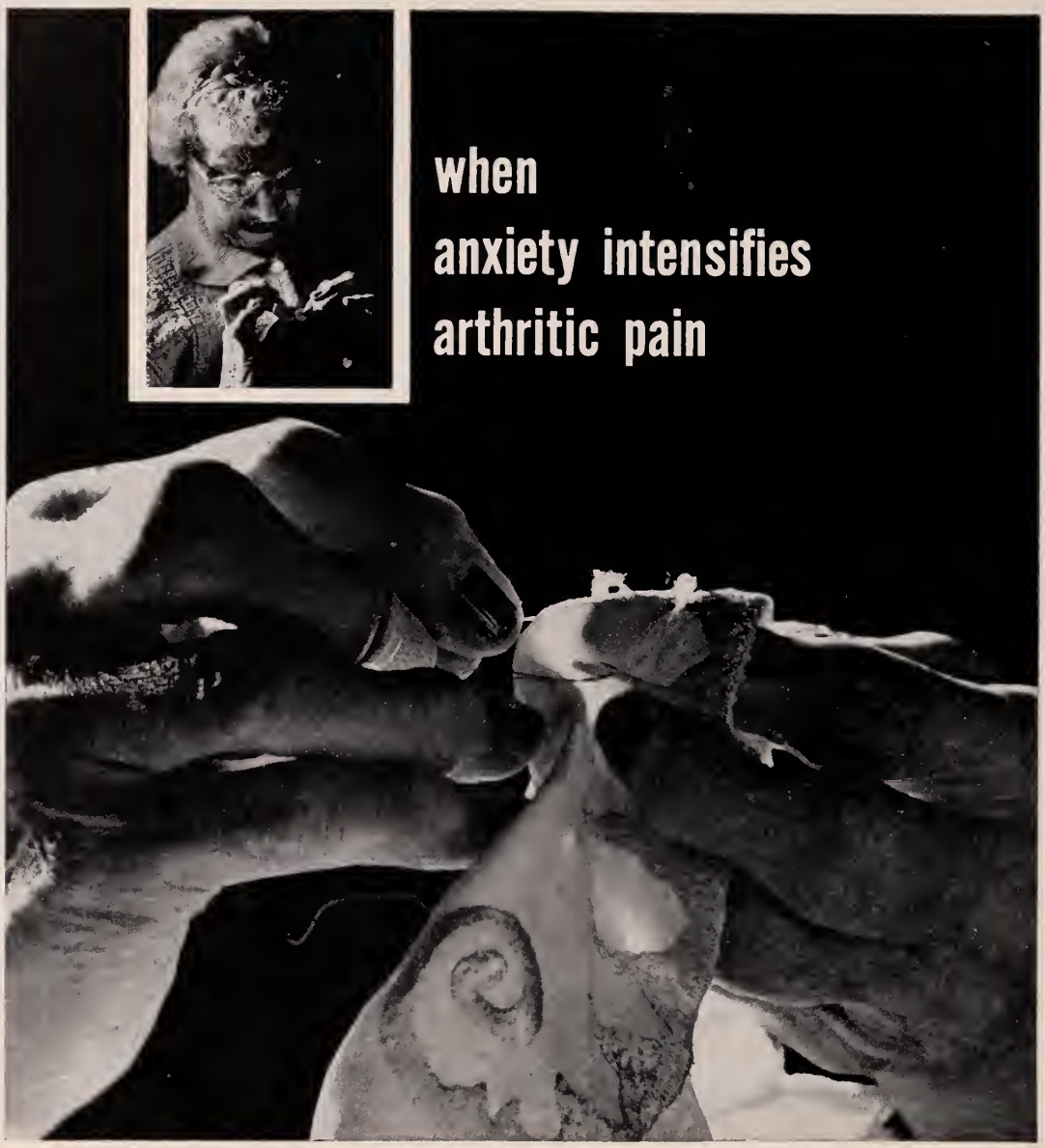
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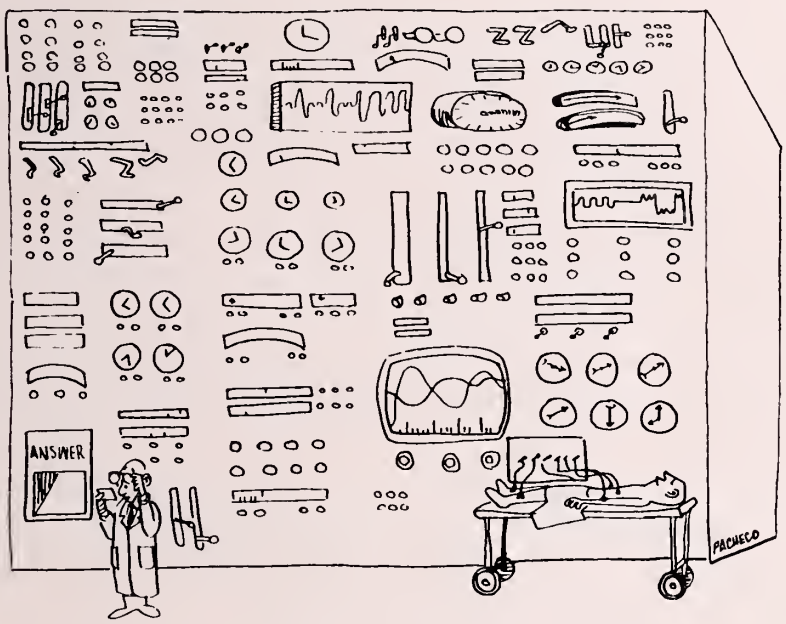
The Virginia MEDICAL MONTHLY

March, 1960

Vol. 87, No. 3
Whole No. 1294

Guest Editorial....

IBM Medicine



Cartoon reprinted from *Resident Physician*, 1959.

A CURRENT METHOD of "working up" a patient might be called "IBM diagnosis". The first step is the listing of the various "impressions", suggested, however remotely, by the patient's history and physical examination. The next step is the listing of all the various x-ray and laboratory procedures that can be thought of in connection with the list of impressions. The procedures are carried out with little if any regard to which may be more likely productive of important information and often in spite of the fact that a definite diagnosis may be reasonably evident long before the long list of diagnostic procedures has been completed. All the diagnostic "buttons" are pushed in, the "machine" gives the patient a time-consuming, exhausting and costly rolling and discharges from its scientific but brainless mechanism a "card" which MAY provide the correct diagnosis.

The truly experienced clinician first ascertains from the patient what troubles him, when and how it started, what body functions seem related to it, what things aggravate the condition and what things minimize or relieve it. This kind of history usually provides a strong clue to the diagnosis. It directs attention to the region of the body that should be examined with special care and often the diagnosis is quite clear after a simple physical examination. The clinician who is considerate of his patient's time, comfort and expense will make only those laboratory and x-ray and other examinations that are necessary to reasonably substantiate the diagnosis and determine the patient's ability to undergo appropriate treatment.

On the other hand, far too many of our present-day clinicians and those who are being trained by them practice "IBM medicine". A "routine history" is assigned to the "low man on the totem pole". All the questions are asked and replies faithfully recorded but with so many irrelevances that in the chaff it is almost impossible to find the grain. The "routine physical examination" is made but sometimes not before the patient has been whisked to the laboratory or the x-ray room. Important facts in the history and physical abnormalities may be missed, ignored or misinterpreted, particularly if they do not jibe with laboratory or x-ray reports. The number of laboratory and x-ray studies made in many patients today is out of all reason. They frequently exhaust the patient, consume valuable time and incur crippling exepnse to the individual if he is able to pay or to the institution for the patient unable to pay.

In most patients the diagnosis can be made without hospitalization and the time-consuming, exhausting and costly routines in vogue today. The hospitalization is all too frequently a convenience rather than a necessity for either the patient or the physician. Unnecessary hospitalization has led hospitals to expand and hospital costs have soared to astronomical figures. Prepayment and insurance plans have had to raise premiums to the point that they are burdensome and sometimes prohibitive in the low income group of patients.

IBM medicine is condoned by some on the basis that the student, the interne and the resident must be taught present scientific methods of diagnosis. There are others, however, who feel that it is not good practice, it is not good teaching, it is not good science and it is not using and developing the intelligence.

C. Bruce Morton II, M.D.

University of Virginia
Charlottesville, Virginia

Chronic Discoid Lupus Erythematosus

GEORGE H. CURTIS, M.D.
Cleveland, Ohio

Here is an able discussion of this disease and its relation to other forms of lupus erythematosus.

IN THE APPROACH to the study of a patient suspected of having lupus erythematosus, I keep in mind a working classification (*Table 1*) based on classifications originated by others but which I alter from time to time as I gather more information about the disease.

TABLE I: LUPUS ERYTHEMATOSUS
(Working Classification)

I. Localized or Chronic Discoid
II. Disseminated Varieties
  A. Chronic Disseminated
  B. Subacute Disseminated
III. Acute Systemic (Positive L. E. Test)
  A. Acute Disseminated
  B. Acute Systemic Without Skin Lesions
  C. Libman-Sacks Syndrome
  D. Rheumatoid Arthritis?
  E. Raynaud's Syndrome?
  F. Periarteritis Nodosa?
  G. Purpura?
  H. Hydralazine Syndrome?
  I. Biologic False Positive Serologic Test for Syphilis?
  J. Renal Disease?

CLASSIFICATION OF LUPUS ERYTHEMATOSUS

It is now generally accepted by those who have studied many cases that lupus erythematosus, commonly called L.E., is a systemic disease and that the chronic discoid types are merely phases or varieties of the systemic condition; I shall say more about this later. Furthermore, I believe it is the consensus that the presence of a positive L.E. test is a strong indication of the presence of the acute systemic form. One cannot as yet say that presence of the L.E. cell phenomenon is absolutely pathognomonic, because the test has been shown to be positive in other conditions, although this is extremely rare. Those syndromes listed in the classification with question marks are included because in an occasional patient with one or more of these conditions, the L.E. cells are present or the L.E. test is positive. The presence of the L.E. phenomenon is indicative of systemic lupus erythematosus until further evidence proves otherwise.

The cutaneous manifestations are diagnostically important, and one must have a working knowledge of the skin lesions of L.E. as well as those of other conditions which may be confused with them. This particularly applies to the lesions of chronic discoid lupus erythematosus from which the lesions of such diseases as lupus vulgaris, psoriasis, sarcoid, lymphocytoma, basal-cell carcinomata and some lesions of syphilis must be distinguished.

Dubois and Martel[1] have emphasized the importance of the careful history and physical examination and the adequate laboratory data, even in chronic discoid L.E., as the survey often discloses evidence that the systemic disease though it lies submerged will become active from time to time.

O'Leary[2] recognized two divisions of chronic discoid L.E.: (1) the localized discoid L.E. wherein the lesions are confined to the face, scalp, ears, and lower lip; and (2) the disseminated form in which the lesions, in addition to the head, are present elsewhere on the body. Recently Schiff and Kern[3] reemphasized the fact that trauma may determine the site of localized discoid L.E. From a questionnaire they gathered 78 cases of localized discoid lupus and added five of their own. In 35 instances the lesions were located elsewhere than about the head.

LESIONS OF CHRONIC DISCOID L.E.

Figure 1 is a photo of a discoid lesion on the face. These lesions are indolent, slowly enlarge peripherally and tend to clear centrally. The border is well defined, elevated, erythematous and slightly indurated. There is a dry, silvery scale attached to which is a keratotic plug that dips into the hair follicle or

Presented at the Thirtieth Annual McGuire Lecture Series and Symposium on Dermatology, Medical College of Virginia, November 12-14, 1958, Richmond.

From the Department of Dermatology, The Cleveland Clinic Foundation, and The Frank E. Bunts Educational Institute, Cleveland, Ohio.



Fig. 1. Lesion of chronic discoid L. E. on the face.

sweat duct on the under surface. On removal of the scale the dilated follicular opening is visible. Lesions on the scalp and in the region of the beard often produce alopecia. On healing there is a tendency to atrophy, telangiectasi and stippling due to atrophy of the follicles. The lesions may show

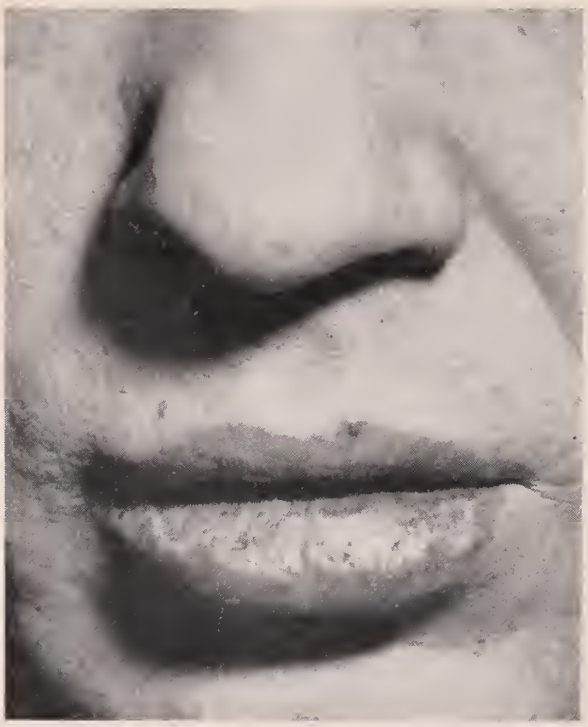


Fig. 2. Lesion of chronic discoid L. E. on the lower lip.

various degrees of change in pigmentation, from depigmentation to hyperpigmentation.

Lesion on the Lip. In the patient shown in Figure 2, the only lesion present was on the lower lip. Clinically it resembled lichen planus but microscopic examination made the diagnosis clear.

Lesion on the Wrist. The patient shown in Figure 3 sustained a mosquito bite on the wrist. About



Fig. 3. Lesion of chronic discoid L. E. on the wrist.

two weeks later this lesion appeared. The histologic picture was that of discoid L.E. It completely disappeared following the administration of chloroquin.

Lesion on the Scalp Showing Alopecia (Figure 4). In an occasional patient the lesions of chronic discoid L.E. may appear to be limited to the scalp. Careful inspection of the borders of the lesions with alopecia and atrophy usually discloses the presence of dilated plugged follicles and stippling. In addition, the ears may show partially hidden lesions on the conchae. Biopsy of an active border is indicated. When accompanied by lesions on the face and elsewhere those on the scalp are usually identifiable.

LESIONS OF DISSEMINATED CHRONIC DISCOID L.E.

In accordance with O'Leary's[2] classification of chronic disseminated discoid L.E. (Figure 5), the dermatosis may be widespread with lesions on the trunk and the extremities. The morphology of the



Fig. 4. Lesion of chronic discoid L. E. on the scalp.

lesions may vary from erythematous macules to the elevated torpid, hyperkeratotic variety and atrophic scars. In the absence of systemic symptoms, and with the histopathology of the chronic lesion, negative L.E. tests and normal laboratory data, one may tentatively make the diagnosis of chronic disseminated discoid L.E.



Fig. 5. Lesions of chronic disseminated L. E. on the trunk and the chest.

LESIONS OF LYMPHOCYTIC DISCOID L.E.

Figure 6 is an example of the lymphocytic type of discoid L.E. Some of the histologic features resemble those of lymphocytomas. It occurs mostly

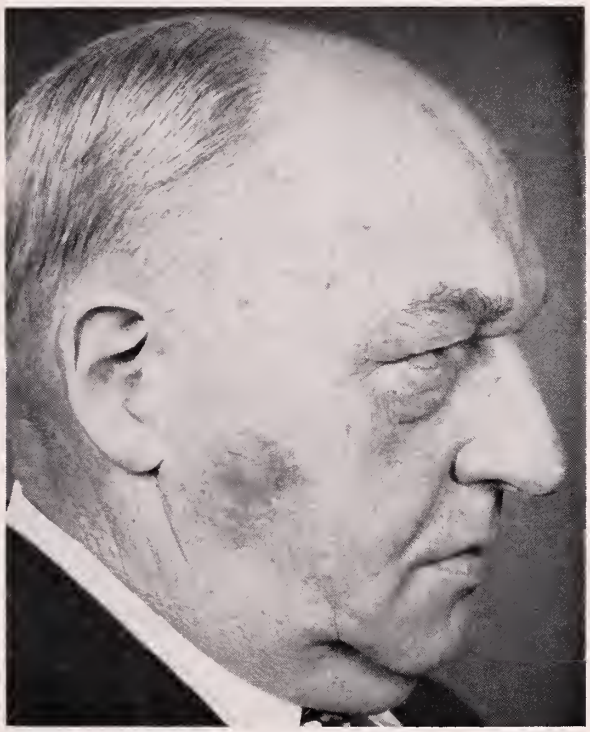


Fig. 6. Lesion of lymphocytic discoid L. E.

in men and often after exposure to the sun. The L.E. test has been negative and in no instance in 10 patients we have seen has there been any evidence of the systemic disease. Our patients have promptly responded to the antimalarial drugs.

There has been some discussion as to its nosologic position. We believe that lymphocytic discoid L.E. is a form of chronic discoid L.E., while others suggest that it is a type of polymorphic light-sensitive dermatosis, or lymphocytoma cutis. Lymphocytic discoid L.E. responds to antimalarial drugs and usually flares up on exposure to sunlight and ionizing radiation. Lymphocytoma cutis usually responds to roentgen therapy but not to antimalarial drugs. Histologically, the so-called "lymphocytic germinal centers" are characteristic of lymphocytoma. They are not present in lymphocytic L.E. Lymphocytic L.E. and the prurigo or plaque forms of polymorphic light-sensitive dermatoses are not as yet histologically

and morphologically distinguishable in early stages, and both respond to antimalarial drugs. In some cases of the polymorphic light sensitivity, passive transfer is demonstrated by the Prousnitz-Kustner technic. The pruritus of the polymorphic light-sensitive eruption may aid in differentiation.

"Lymphocytic infiltration of the skin" is another term introduced into the literature in relation to discoid L.E. Insofar as I can determine, lymphocytic infiltration of the skin consists of foci of lymphocytic infiltration almost indistinguishable from those of L.E. but without, or with, minimal changes in the epidermis and collagenous tissue of discoid lupus. It may be that cases which we believe to be lymphocytic L.E. belong to this type of nodular L.E.

Arnold,[4] of Honolulu, recently presented a review of lupus erythematosus profundus which is thought by some to be a variety of discoid lupus. It is rare, and I believe that we have had no such case at the Cleveland Clinic. Arnold describes the condition as follows: "Sharply defined, firm, painless nodules occurring under clinically unaltered skin may rarely appear as manifestations of lupus erythematosus. . . .

"Epidermal changes characteristic or suggestive of lupus erythematosus; fibrinoid necrosis of collagen; and prior, concurrent, or subsequent development of ordinary discoid lupus erythematosus, provide evidence that these nodular lesions are, in fact, a part of this disease process." Arnold[4] treated his five patients with bismuth and two responded well. He also stated that Sulzberger used chloroquine in a patient in whom the nodular lesions disappeared along with discoid lesions.

RESPONSE OF LESIONS OF LYMPHOCYTIC L.E. TO CHLOROQUINE (Figure 7)

This is the same patient as the one shown in Figure 6, after treatment with chloroquine. The lesion completely disappeared.

DIFFERENTIATION OF DISEASES SIMILAR TO CHRONIC DISCOID L.E.

The following pictures are of those diseases which are chiefly confused with chronic discoid L.E. The biopsy findings usually are the best criteria for diagnosis.

Lupus Vulgaris (Figure 8). The lesions of lupus vulgaris tend to be located about the orifices: nose, mouth, ears, and perineum. Although they may be scaly, hyperkeratotic plugging usually is not present



Fig. 7. Response of lesion of lymphocytic discoid L. E. (shown in Figure 6) to chloroquine.

and the color is a waxy-yellowish tan. On diascopy the "apple jelly" colored granulomatous foci in the border are characteristic.

Basal-Cell Carcinoma (Figure 9). Basal-cell car-



Fig. 8. Lesions of lupus vulgaris.

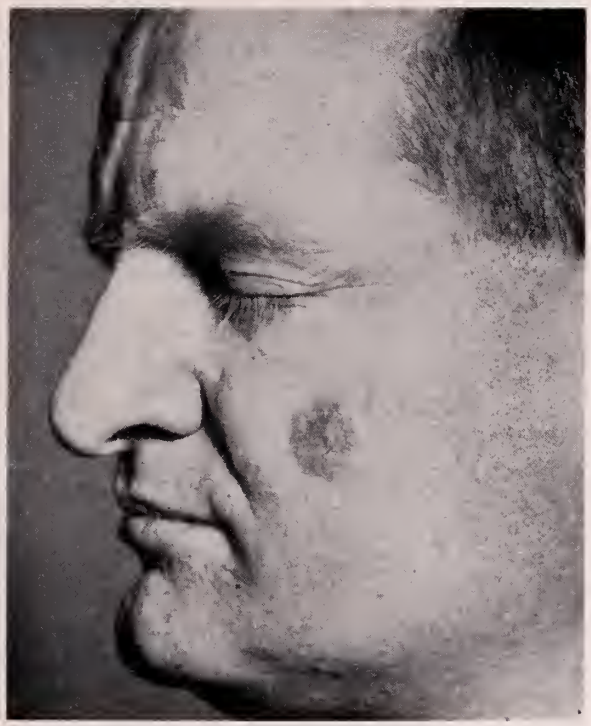


Fig. 9. Basal-cell carcinoma.

cinoma particularly when superficial and cicatricial may closely simulate an old chronic discoid lesion of L.E. The fine threadlike nodular border with minute telangiectasis, and an absence of dilated plugged follicles favors a diagnosis of carcinoma.



Fig. 10. Syphilitic chancre on the cheek.

Syphilitic Chancre on Cheek (Figure 10). This lesion had been diagnosed as chronic discoid L.E. and was treated with solid carbon dioxide. The patient stated that it progressively enlarged and at the time we examined her we observed that the cervical lymphadenopathy had become apparent. Dark-field examination and the blood serologic tests for syphilis were positive. The lesion promptly healed during treatment with penicillin.

Psoriasis of the Face (Figure 11). Plaques of



Fig. 11. Lesions of psoriasis on the face.

psoriasis do not ordinarily occur solely on the face as does localized chronic discoid L.E., but usually are a part of the generalized eruption. The color is a more pale red, the scale is silvery and on removal reveals pinpoint bleeding, which is in contrast to the deeper red color, dilated follicles with horny plugs in chronic discoid L.E. Psoriasis does not tend to leave residual atrophy, telangiectasis and pitting.

Sarcoid (Figure 12). The cutaneous lesions of sarcoidosis occur principally on the face, exterior surfaces of the extremities, and upper back—a distribution that may simulate chronic disseminated L.E. Further, they may range from reddish papules, macules, to nodules, and plaques. The macular lesions and plaques more often simulate chronic discoid L.E. Sarcoid lesions on the face in whites have a peculiar bluish center and a yellowish border. Diascopy reveals component yellowish-grey foci.



Fig. 12. Lesions of sarcoidosis.

Some believe that because of its benignity chronic discoid L.E. is not related to systemic L.E. In the section on "Collagen Diseases" of Cecil and Loeb's *A Textbook of Medicine*, Baehr[5] notes: "In spite of its name [disseminated L.E.] this disease bears no relationship whatever to tuberculosis and lupus vulgaris, or to that benign indolent skin lesion known to dermatologists as discoid lupus.

"Unlike discoid lupus, erythematous lupus is not a primary disease of the skin." Reiches[6] recently reported on data obtained from 100 internists of whom 61 stated that there was no connection between the two conditions.

On the other hand, in recent papers of Haserick[7] and of Dubois and Martel[1] there is considerable evidence to suggest that chronic discoid L.E. is a variety of systemic lupus. Dubois and Martel[1] studied 41 patients with chronic discoid L.E. over a prolonged period and observed symptoms and signs of the systemic disease in 96 per cent of the patients.

CHRONIC DISCOID AND SYSTEMIC L.E.: OBSERVATIONS OF DUBOIS AND MARTEL[1]

Table II is my own summation of Dubois and Martel's[1] observations because I am not familiar with any other work that is as detailed as theirs.

Table II: Summary of Observations in Chronic Discoid L. E.
(After Dubois and Martel[1])

Manifestations	No. of Patients
Hyperglobulinemia	39
Sedimentation Rate (Elevated)	37
Skin Flare-Ups on Exposure to Sunlight	26
Rheumatoid Arthritis and Arthralgia	23
Leukopenia (< 5,000 w. b. c.)	16
Weight Loss During Activity of Skin Lesions	13
Diffuse Partial Alopecia	10
Pleuritis	10
Raynaud's Phenomenon (Late)	8
Gastrointestinal Disturbance	5
Positive L. E. Tests	3

The flare-ups of skin lesions occur on exposure to sunlight. The diffuse partial alopecia is common in acute disseminated L.E. Raynaud's phenomenon in the eight patients occurred some time after the appearance of skin lesions. Exacerbations of the skin lesions and arthritis coexist. The hyperglobulinemia was of the same order and direction as in the systemic form. In two of the patients with positive L.E. tests the duration of chronic discoid L.E. had been respectively 10 years and three years. The third patient had arthritis, some time later discoid lesions, and still later L.E. tests were positive. The authors believed that the manifestations of systemic L.E. occurred more frequently and severely in patients with disseminated discoid L.E. than in those with the localized form.

Haserick[7] pointed out the relationship between the two conditions from the direction of systemic L.E. toward the chronic discoid form, summarized in Table III.

Table III: Findings Common to Systemic L. E. and Chronic Discoid L. E.
(Observations of Dr. Haserick[7])

1. Skin Lesions
2. Histopathology
3. Photosensitivity (Common to All Types)
4. Tiselius Electrophoretic Pattern
5. Familial Tendency
6. Conversion of Types
   Chronic Discoid L. E. to Systemic L. E. (6 cases)
   Systemic L. E. to Chronic Discoid L. E. (9 cases)

SYSTEMIC L.E. AND CHRONIC DISCOID L.E.

Although there is a sharp contrast between the discoidal lesions and the diffuse erythematous reaction in the acute disseminated form, oftentimes in both conditions the butterfly distribution is seen. It rarely is possible to observe the entire transition in one patient at one time. The change is more

apparent when comparison is made among several patients. Both conditions show histologic changes of atrophy, follicular plugging, liquefaction degeneration, and banal inflammation; the changes vary only in degree. The Tiselius electrophoretic pattern may alter in the same way whether the patient has discoidal or acute systemic L.E. Chronic discoid lesions developed in nine patients when the acute form was brought under control with steroidal therapy. In each of several families in one sibling chronic discoid L.E. developed, whereas in the other sibling the acute form developed.

Two other lines of investigation seem to point toward a connection between discoid L.E. and systemic L.E. Huff, Taylor, and Keys[8] have shown that abnormalities of peripheral blood flow as demonstrated by photoelectric plethysmograms in chronic discoid, in subacute, and in acute L.E. are in the same direction. These observations have been confirmed at least in part by others. Michelson[9] has demonstrated the presence of hematoxylin bodies (degeneration product of desoxyribonucleic acid) in microscopic sections of skin lesions of various forms of L.E.

Hematoxylin Bodies in Kidney in Acute Systemic L.E. Figure 13 shows hematoxylin bodies in the kidney of a patient with acute systemic L.E. We have not yet observed the bodies in the skin lesions but hope to do so when more information is available.

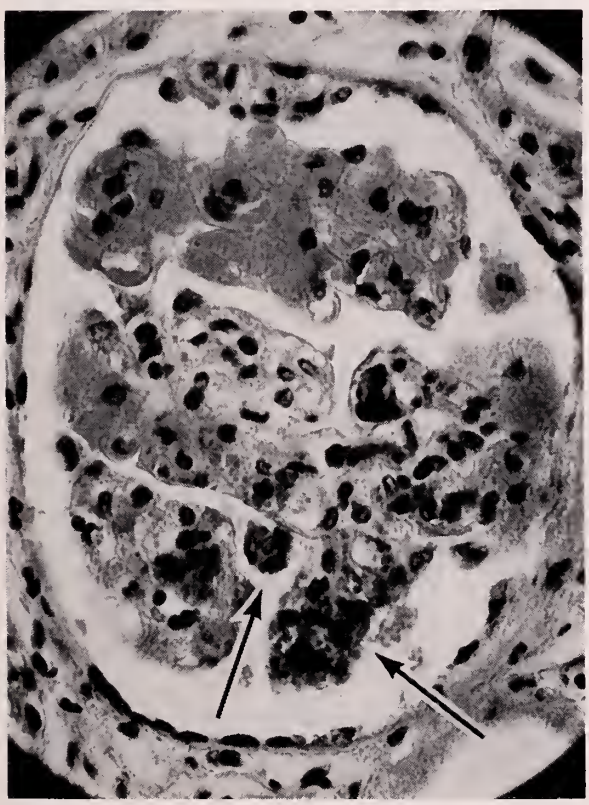


Fig. 13. Hematoxylin bodies in the kidney of a patient with acute systemic L. E.

TREATMENT

The antimalarial drugs have become well established in the treatment of all forms of L.E. There is an almost specific effect on cutaneous lesions of the discoid, subacute, and acute forms. The mechanism of their action is not as yet well understood, but suffice it to say that they are anti-inflammatory and inhibit some enzyme systems. Some investigators hold that the antimalarial drugs exert some ultraviolet-screening or absorption effect, and thus offer some protection for the subepidermal tissues. Quinacrine, chloroquine, dihydrochloroquine and amodiaquine and Triquin seem to be equally effective in my experience with chronic discoid L.E. Quinacrine has the disadvantage of discoloring the skin.

The dosage schedule may be individualized depending upon the side reactions in the patient. Taking chloroquine, as an example, for chronic discoid L.E., one may begin with the administration of 500 to 750 milligrams daily in divided doses for two to four weeks, and then if indicated, the dose is reduced to 250 milligrams daily. Treatment is continued from four to six weeks after all activity has ceased and healing is definitely established. Substitution of one antimalarial drug for another depends on the side reactions elicited and on the effect on the lesions.

In the chronic disseminated form, especially when there is suspicion of incipient progress to the subacute variety, as well as in the subacute and acute forms, therapy with the antimalarial drugs is cautiously initiated. A flare-up of lesions may occur in the first two weeks if the initial dosage range is 250 to 500 milligrams of chloroquine per day. If the dosage is begun at 125 to 250 milligrams every other day, the flare-up is usually avoided, and at the end of two or three weeks the dosage may be gradually increased. Administration of the antimalarial drugs is undertaken as a calculated risk as to side reactions such as gastrointestinal symptoms, visual disturbances, as well as severe reactions to the drugs, and skin eruptions.

In a rare case the discoid lesions may be extremely resistant to the antimalarial agents; it may then become necessary to consider treatment with bismuth, gold, or nitrogen mustard.

Dr. Haserick and I recently reviewed the records of about 150 patients having systemic L.E. treated

with the antimalarial drugs. We obtained the clinical impression that the antimalarial drugs tended to prevent the development of discoid lesions in controlled systemic L.E.

Subacute L.E. Before and After Treatment with Chloroquine. I cannot resist the temptation to show you a picture of our most rapid response obtained with chloroquine (even though the young lady had subacute L.E.). Figure 14 shows the eruption before treatment and Figure 15 at the end of two weeks of



Fig. 14. Patient with lesions of subacute L. E. before treatment with chloroquine. Note the plaques on the upper lip simulating chronic discoid lesions.



Fig. 15. Patient shown in Figure 14 after two weeks of treatment with chloroquine for subacute L. E.

treatment. (I always like to look at pictures of "Varga girls" don't you?)

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Factors Influencing Therapy in Peripheral Vascular Disease

GEORGE H. YEAGER, M.D.
Baltimore, Maryland

This review will be of interest to both the physician and the surgeon.

"WE RECOGNIZE then as the principles for successful blood vessel suturing, that a continuous surface of vascular endothelium must line the lumen and that as little injury as possible must be done this endothelium. The importance of presenting to the lumen of the vessel a continuous surface of vascular endothelium is appreciated when we recall what has been learned in a somewhat coarser fashion by intestinal suturing. The presence of foreign substances in the lumen of a blood vessel promotes clotting. Some substances favor clotting more than others. A coating of vaseline or paraffin retards clotting. Other things being equal, however, the larger the amount of foreign substances or raw surface in the blood vessel, the greater the likelihood of extensive clotting. A mattress suture, which turns out a flange, not only approximates the intima more accurately, but leaves almost no thread in the lumen, whereas a continuous overhand stitch leaves a considerable amount of thread in the lumen. As for instruments, the author uses #16 straight needles threaded with five-zero twisted black silk.

"The transplantation of a segment of a vein or of an artery, or of a rubber tube, involves the same technique as suturing a divided vessel. It is best, however, to have two arterial suture staffs instead of one. Three guy sutures should be placed at one end but only the first two fastened to the staff. Some attention must be given to securing a section of the vein that is to be transplanted. The saphenous is the best vein to use as a transplant in man. The vein must be exposed and handled gently. A much longer portion should be taken than is supposed to be necessary, for it contracts greatly after being removed and it is a simple matter to cut off any excess if it is too long. The author has used, experimentally, rubber tubing of various kinds to replace an arterial segment. This, in most instances, becomes readily covered with tissue that resembles the adventitia of a blood vessel. It is well known that rubber, when properly prepared, is very slightly irritating to the tissues. If, then, adventitia can be thrown around the rubber tube as an encapsulation, it would probably support the blood current after the rubber had degenerated. The high reproductive power of vascular endothelium is frequently observed in the rapid lining of aneurysms that have suddenly enlarged and it seems possible that this endothelium might cover the inner surface of the rubber tubing. In this way, a strong adventitia and an intima may possibly be secured. Tubes have varied from thick, black rubber to very thin rubber and have been coated with vaseline or paraffin. While it would be impossible to suture tubes, especially thick tubes, by the overhand stitch and, at the same time, make an accurate approximation and avoid sharp edges of the tubing pointing inward, by using a mattress suture the sharp edges of the tube are everted." *

With the interest that is now focused on the various aspects of diseases of the vascular system, and the strides that are being made in surgery of the blood vessels and heart, it seems peculiarly appropriate to select a vascular topic for the J. Shelton Horsley Memorial Lectureship.

It is recognized that Dr. Horsley was renowned as a general surgeon, and that he made many original contributions particularly in the field of gastric surgery. Perusal of his personal bibliography reveals a wide range of interest. That he had a most comprehensive and far advanced knowledge of the technical problems of blood vessel suturing is attested by the statements quoted above. Many of his thoughts have stood the test of time. Many present day vas-

J. Shelton Horsley Memorial Lectureship.

*Surgery of the Blood Vessels: J. Shelton Horsley, M.D., F.A.C.S., Surgeon-in-Charge, St. Elizabeth's Hospital, Richmond, Virginia. C. V. Mosby Co., Publisher, St. Louis, 1915.

cular surgeons would agree with his statement that the saphenous vein is the best vein to use as a transplant in man. His observations regarding the reproductive power of vascular endothelium, and the encapsulation of a rubber tube vascular prosthesis by adventitia have been confirmed repeatedly.

Since the time of Horsley's observations and particularly during the last decade, there have been many advances in the field of vascular surgery. This is particularly true in reference to surgery for degenerative vascular diseases.

Retrospective analysis not infrequently permits a more objective approach to problems than initial enthusiasm. Sufficient time has now elapsed since the pioneering attempts of Dos Santos to reconstruct arterial channels that had been closed by arteriosclerosis to permit appraisal of the results obtained with arteriohomografts, venous autografts and thromboendarterectomy.

Even though great advances have been made in the treatment of atherosclerosis obliterans, there is lack of agreement regarding the relative merits of the various procedures for the surgical treatment of occlusive peripheral vascular disease. Indications for their use and the long term results of treatment are currently under survey.

Arteriosclerosis may be regarded as a complex mixture of degenerative and reparative processes leading to increased rigidity, diminished elasticity and decrease in caliber of arteries. It is a generic name that includes (1) atherosclerosis, (2) atherosclerosis obliterans, (3) medical calcification or Monckeberg's sclerosis, and (4) arteriosclerosis.

Surgical attention has been directed to atherosclerosis obliterans, since it is an obstructive, degenerative arteriopathy characterized by occlusion of arteries by atheromata and, or by, superimposed thrombus. Clinical types vary from that of chronic obstruction of the bifurcation of the aorta (Leriche Syndrome) and/or a major peripheral artery to obstruction in digital arteries of the toes.

Patients with complete aortoiliac occlusion generally have patent arteries distal to the occlusion and relief of the obstruction usually is followed by excellent results. Few of these patients have symptoms of coronary or cerebral atherosclerosis. The prognosis, in terms of relief of symptoms, is extremely good. The results are gratifying and the indications for operation are broad when the occlusive process is complete and confined to the aortoiliac area. Extension of the disease beyond the external iliac artery, however, requires more careful evaluation since results in these cases are less satisfactory.

In the group of patients with partial aortoiliac occlusion, atherosclerosis is usually extensive and simultaneous involvement of coronary and cerebral vessels is not uncommon. The risk of operation is greater in this group. The operation itself is frequently difficult, and the results are more uncertain than in the patient with complete occlusion. An analysis of various reports suggests that there is a greater incidence of late failures following the use of grafts than with thrombo-intimectomy. Thrombo-intimectomy is preferable; however technical considerations may influence the decision in favor of a by-pass graft. These include such factors as duration of the operation, and the condition of the diseased blood vessels. In advanced atherosclerosis approximately 50 per cent of patients have heart disease. Diversion of blood to the lower extremity and increased physical activity may result in decrease of coronary and cerebral flow.

Thrombo-intimectomy apparently is the procedure of choice in the treatment of occlusive disease of arteries of medium or small size. Early failures may be attributed to inadequate run-off, whereas late failures often result from inadequate run-in. The occlusive process proximal to the graft may progress to a point where blood flow into the graft is seriously curtailed. Compression of a graft from external force may cause occlusion and acute thrombosis. Elongation of the graft, due to disappearance of the pleats may produce angulation and reduction in size of the lumen. Use of a by-pass graft, under some circumstances, may actually be harmful since the elimination of a pressure gradient across the occluded segment removes the stimulus for functioning of collateral circulation.

The most common method of aortic reconstructive surgery has been the use of bifurcation homografts. It has been pointed out by Creech that the gradual loss of elasticity, the late rupture and occlusion of some of these grafts and the failure of the host to replace the graft tissue, which at first was thought to occur, as well as the difficulty of obtaining a sufficient supply of them, have made many surgeons in the past few years discontinue their use and utilize prosthesis of synthetic fabrics.

The chief attribute of the homograft in the past has been that it was easier to implant than any other graft, so the initial success rate with them was higher, although with the newer type of prosthesis it is believed this is no longer true. The late failures

with the homograft that are beginning to appear, offset the high rate of early success. It is believed that dacron and teflon or a mixture of these two synthetics make satisfactory aortic bifurcation replacements because they are placed in a portion of the body that is almost in a constant, fixed position, so that late rigidity of them, if it develops, should not influence their function unless the fabric weakens. For a satisfactory prosthesis it is generally agreed that the material should have a certain degree of porosity, in addition to being an inert biologic material, so that the tissues of the host may invade the interstices of the cloth and probably play a part in the formation of the inner lining, or a pseudo-intima.

It appears doubtful if the host lays down a sufficiently strong encompassing tube of fibrous tissues to withstand the continued stress of the arterial blood stream, so that in addition it is necessary that the prosthesis should maintain its tensile strength for years. It appears from animal experiments that in small artery anastomosis, dacron and nylon sutures are superior to silk, as suture material, because they are less thrombogenic. Dettinger and Bowers have found dacron to be superior to silk, cotton, nylon and orlon.

Linton states that one of the chief defects of nylon and also ivalon prosthesis, from personal experience, is that although when they are implanted they are soft and flexible, as the months go by they become more rigid and lose their elasticity and flexibility so that across joint areas they tend to kink, with resulting interference with blood flow and failure of the graft from thrombosis or dislodgement of the pseudo-intima with embolization of the distal arterial tree.

As the diameter of the graft decreases below 9 mm., maintenance of patency becomes the primary problem and small variations in the graft become more apparent. Synthetic grafts, less than 5 mm. in diameter, are not satisfactory and the results should not be expected to be good.

Sympathetic ganglionectomy for the treatment of obliterative vascular diseases has fallen somewhat into the discard in recent years in view of the satisfactory results obtained by means of grafting procedures and endarterectomy. For some patients it is a limb-saving procedure and therefore should not be discarded from consideration. Performed properly for the lower extremity, the effect will last as long as the arterial in-flow does not become completely occluded. It is recognized that it does not restore the arterial circulation to the muscles of the lower limb to the degree that reconstructive arterial surgery can accomplish, although some authors believe that it does. It is well to remember that lumbar sympathectomy augments chiefly the circulation to the dermis, especially of the feet and toes, and so, if grafting or endarterectomy procedures cannot be performed, it is definitely of use and not infrequently will save a limb.

Such a procedure is effective not by removal of diseased tissue, but by alterations of function. Actually it modifies perversion of function. Sound physiologic observations should form the basis of such intervention; otherwise, rather than saving an extremity it may lead to its loss.

ARTERIAL INJURIES

In arterial injuries an end-to-end type of anastomosis is preferable. When this is not feasible, a venous autograft (saphenous) becomes a preferred method of treatment. Arterial homografts or synthetic prostheses are other procedures of choice.

ACUTE ARTERIAL OCCLUSION

The number of successful aortic and major artery embolectomies has increased greatly in the last few years. Success has also been attained in late cases of peripheral embolism by the retrograde flushing technique with a dilute solution of Heparin to clear the arteries of the secondary thrombi that form distant to the embolus. The importance of early embolectomy before the formation of the secondary distal thrombus should be stressed. Urgency is as great as ever from the viewpoint of their removal.

In arteriosclerosis particularly, thrombosis of arteries may occur. It may come about slowly, manifesting itself clinically as intermittent claudication after walking a few blocks. On the other hand, it may appear dramatically, as a thrombosis in situ.

Opening the artery and performing an endarterectomy may accomplish an excellent result.

Embolic phenomena are far less common than was formerly thought. Thrombosis in situ accounts for 95 per cent of the sudden occlusions. Prompt action is indicated. Here, too, the approach must not be just to the site of the embolus, but must be below it and above it and the intervening lumen must be cleanly cleared of obstruction. This can be accomplished by endarterectomy, by flushing and probes, and by approach at multiple levels.

Dramatic closure of a major artery by an embolus originating from the heart or an atheromatous plaque, or a mural thrombus of an aneurysm, calls for im-

mediate removal. Many patients may not be diagnosed within the optimum six to twelve hours following arterial embolism. Satisfactory results may be obtained even after a week or two following an embolus. It may be advisable to do a preliminary sympathectomy first, and not wait for the thrombectomy to fail, or to do it when the exploration of the distal segment proves that a direct attack on the occlusion is impossible.

ANEURYSMS

The surgical treatment of aortic aneurysms and obliterative atherosclerosis of the distal and abdominal aorta carries a definite risk because of the magnitude of the surgical procedure undertaken. Renal failure may be an important cause of death. The various treatments include:

1. Resection and end-to-end anastomosis.
2. Removal of the aneurysmal sac.
3. Arterial homografts.
4. Vein grafts.
5. Obliteration of the aneurysm.
6. Peri-aneurysmal irritation.
7. Intravascular wiring.
8. Wrapping with wire.
9. Lowering of resistance peripheral to the aneurysm.

Great strides have been made in the surgical treatment of aneurysms of the aorta and the great vessels. The method of choice consists of resection of the aneurysms with restoration of aortic or arterial continuity by the implantation of a prosthesis. Sacular aneurysms of the arch of the aorta may be treated by resection of the aneurysm with closure of its neck.

Dissecting aneurysms require early diagnosis if they are going to be successfully treated. Reshunting the arterial blood back into the main aortic lumen by dividing the descending thoracic aorta and then obliterating the false passage in the distal portion of the aorta by approximating the inner and outer layers is indicated. A small segment of the inner intima and media is excised from the proximal aorta, and then the aorta is re-anastomosed by the end-to-end suture. Making of a window in the intimal wall of the false passage to direct blood back into the aortic lumen has also been done successfully.

THROMBO-ANGIITIS OBLITERANS

Some clinicians contend that the clinical condition which we are calling by this term is in reality arteriosclerosis in the late 30 and early 40 age group, with a segmental involvement. Others maintain the belief that it is a specific inflammatory lesion of the arteries, attacking young individuals from 18 to 35, mostly men but sometimes (1%) women.

The symptoms are extremely variable and it is conceivable that the term "thrombo-angiitisobliterans" is being used to include an extremely broad group of vascular derangements.

Therapy is related to the severity of symptoms and the degree of ischemia. This therapeutic range may vary from simple measures such as complete abstinence from tobacco combined with proper hygienic care to anti-coagulation therapy and sympathectomy.

In the presence of acute periphlebitis, infected ulceration or spreading gangrene, sympathectomy should not be undertaken.

Theis, in his report, states that a process of atherosclerosis, occlusive thrombosis, and a reparative reaction seem to account for the peripheral arterial lesions of thrombo-angiitis obliterans of presenile gangrene.

In this group, arterial reconstructive surgery should be considered and performed when possible. When indicated, lumbar sympathectomy is an excellent supportive procedure. Cessation of smoking should be insisted upon.

RAYNAUD'S DISEASE

Vasospastic conditions of the upper extremity generally termed Raynaud's Disease present a challenge to the medical profession. This disease involves the digital arteries and arterioles. These patients have an increased sensitivity to cold as compared to normal persons. The sympatholytic drugs are of value in many of these patients and have a real range of usefulness. If there is failure of response to conservative measures, sympathectomy is indicated, recognizing that even with adequate denervation, the condition may recur. The severity of the disease and the amount of disability should form the basis for the therapeutic range. In the mild and non-progressive types, sympathectomy is not indicated.

The axillary approach to the upper thoracic ganglions is preferred. Preservation of the inferior cervical ganglion to prevent Horner's syndrome is recommended. Many authorities believe that the stellate ganglion should be removed.

Roedling in a recent report described the technique of using an endoscope in resecting the thoracic sympathetic nerves and ganglia. It may have the advantage of reducing major operative trauma inherent in orthodox approaches.

SUMMARY

A brief resume with current thoughts in the treatment of peripheral vascular disease is presented. Certain factors that influence modes of therapy are discussed.

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Need for Rehabilitation Facilities

A young hospital administrator suffered a spinal injury resulting in paralysis of his arms and legs. At first, he was completely dependent on others. But through an intensive course of rehabilitation, he learned to feed himself, shave, write, use a dictaphone and perform other hand activities with the aid of simple mechanical devices. He now is able to operate an electric wheel chair which provides him a large measure of independence and mobility. And, even though his disability remains, he will return to his former type of work.

A 42-year-old mechanic, whose legs were amputated following an accident, also has returned to a bench-type mechanic's job. Through rehabilitation, he learned to walk on artificial legs. He lives at home, drives a hand-controlled car to and from work, and is completely independent.

These cases, described in the January 16 Journal of the American Medical Association, are but 2 of the 30 million persons who require long-term care, according to Dr. Louis B. Newman, Chicago, president of the American Academy of Physical Medicine and Rehabilitation. They demonstrate how rehabilitation procedures can return the sick and injured to productive lives.

"The problem of the rehabilitation and care of the long-term patient is of tremendous magnitude. Both the increase in population and the increase in the human life span bring us face to face with the realization that the number of persons with illness and injury will parallel these increases."

"We must be fully aware of and quickly correct an old and, at times, persistent notion that long-term or chronically ill persons are all in the older age bracket. As a matter of fact, about 16 per cent of persons with chronic disease are under 35 years of age.

"The increased incidence of heart disease, the yearly increase in the number of cancer deaths, the rising number of severe disabilities from accidents . . . the alarming rise in the incidence of mental disorders, the steadily rising number of disabilities resulting from degenerative diseases, and blindness and impaired or loss of hearing associated with the aging and the aged—all contribute toward the large segment of the population that needs prolonged care.

"It is not a one-man job and must be squarely faced by all federal, state, and community institutions and agencies whose programs should be actively coordinated and integrated . . . to achieve the greatest measure of success.

"There must be sufficient hospitals, rehabilitation services and centers, nursing and convalescent homes, sheltered workshops, homes for the aged, and adequate number of properly trained professional personnel to handle this tremendous patient load."

Nursing homes should be equipped for continued maintenance activities to prevent the partially disabled patient from deteriorating eventually to total dependence. "Life is being prolonged, but it should also be enriched."

Dr. Newman also is chief of the Physical Medicine and Rehabilitation Service, Veterans Administration Research Hospital, and professor of physical medicine and rehabilitation at Northwestern University Medical School.

The Transmission of Early Infectious Syphilis Through Homosexual Practices

E. RANDOLPH TRICE, M.D.
SETH GAYLE, Jr., M.D.
FREDERICK A. CLARK, Jr., M.D.
Richmond, Virginia

Only recently has this important problem in the diagnosis and treatment of venereal disease been appreciated.

SUBTLE CHANGES in the epidemiology of early infectious syphilis occur from time to time which may be of some practical importance to the practicing physician. Recent examples of this include the prevalence of venereal disease in young adults during World War II and the somewhat alarming increase of infections among teen-agers noted during the past five years. In the past year a new trend has been seen in that a definite increase in early infectious syphilis in homosexuals has occurred in several parts of the nation.[1] This observation has been noted in the Richmond area.

During the first nine months (Jan.-Sept.) of 1959, early infectious syphilis was diagnosed and treated in forty-three (43) individuals in the Venereal Disease Clinic, City of Richmond, Department of Public Health. Of this group eighteen (18) or forty-two per cent (42%) were known homosexuals.

EPIDEMIOLOGIC FINDINGS

The accompanying chart illustrates some of the epidemiological features found following intensive interviewing and contact investigation of a patient, an active homesexual, with primary syphilis (A in figure). The patient, an eighteen year old Negro, was diagnosed by a private physician and referred to the clinic for interview and treatment in April 1959. This patient named six male contacts (passive homosexuals) who were located and examined. Three of these were found to be free of infection, but three others had serologic evidence of early syphilis. Any of these three actually may have had primary syphilis with lesions in the rectal mucosa since sodomy was the method of sexual contact admitted by most of these individuals. Rectal examinations were not performed routinely when there was serologic proof of infection. One patient (B in figure) named twenty-nine recent male "contacts". He admitted sexual contact with eight (designated by solid line in figure) but only "casual association" with the other twenty-one individuals (designated by broken line in figure). Twenty-seven of the twenty-nine named by patient B were located and examined. Three of the "casual associates" (C, D, & E in figure) were found to have early syphilis (untreated); another was already under treatment in the clinic; and nine other selected individuals were given prophylactic treatment without a positive diagnosis of syphilis when the magnitude of the problem to the public health became obvious. The chart illustrates generally similar results from investigation of the other contacts named by the original patient.

Individuals F and G in figure were patients with early syphilis seen during the same period but not named by any individuals in the original chain of infection attributed to patient "A". However, the association between the chains may have been greater than a mere time coincidence.

In all, one hundred males and twenty-four females were examined as a result of this interviewing and contact investigation. None of the females named were found to be infected.

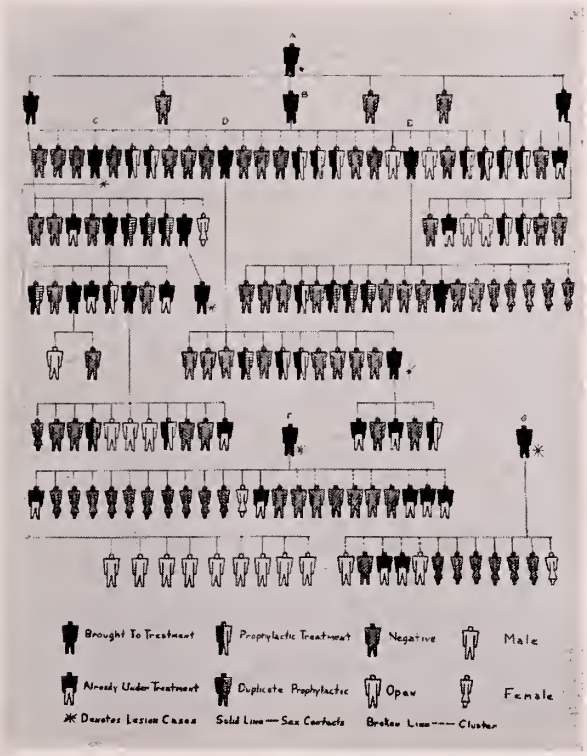
COMMENT

Study of the chart reveals several interesting features. Obviously, contact interviewing and investigation of patients with early syphilis is very reward-

From the Venereal Disease Clinic, City of Richmond, Department of Public Health. With technical assistance of James L. Byrd, Edward H. Sharpe, and Louis W. Hine, U. S. Public Health Service Contact Interviewer-Investigators.

ing from the standpoint of control of this contagious disease. Thirteen additional patients were brought to treatment as a direct result of the investigation of the original patient. Six of these were diagnosed as having primary or secondary syphilis, and seven others were diagnosed as having early latent syphilis. In addition, nineteen patients were given prophylactic treatment in an effort to bring the "epidemic" to an end. The availability of trained and skilled investigators was an important factor in identifying and interrupting the chain of infection.

The promiscuity of homosexuals is well illustrated. The homosexuals in this group named an average of eight sexual contacts as compared to an average of three to four named by heterosexual patients seen in this clinic. Homosexuals, when they finally "open up", may name a dozen recent contacts. The interview is difficult for obvious reasons, and the homosexual is usually reticent to give contact information. Additional names may be recorded by asking, "Do you have any friends who might need a blood test"? In the chain cited, three infected individuals (C, D, E in figure) were located from information given by patient B in response to this question.



Figure—Results of contact investigation of three homosexual patients (A, F & G) with primary syphilis. Thirteen additional patients were brought to treatment as a result of contact investigation. Nineteen others were given prophylactic treatment. Nine individuals were named a second time by others in the chain and received a second (duplicate) prophylactic treatment.

Homosexuals often attempt to hide their perversion by naming numerous female acquaintances as contacts (E in figure). Usually these turn out to be false leads as was apparently the case in this group where all females examined were found to be free of infection. However, it is not unusual for homosexuals to engage in heterosexual practices on occasions, and all female "contacts" should be examined.

Actually, how new the problem of venereal disease is among homosexuals is really not known. It may be that skilled interviewing and intensive investigation by trained personnel simply has brought to light a situation which has been present for many years. It is not believed that the problem is entirely limited to the lower socio-economic group seen in the clinic. These cases may be seen as well in private practice among the well-to-do. One of us (E.R.T.) treated a 43 year old white male private patient (of the upper economic strata) in August 1955 for early syphilis. All serologic tests returned to non-reactive in October 1956 and remained so until 1959 when he returned saying, "a friend in another city has 'V.D.' and advised that I have a check-up." His STS was reactive in high titre, and early syphilis was diagnosed again. Actually, he had been treated in March 1949 for syphilis in another city and returned to sero-negativity in February 1950. No oral or genital lesions were found on any of the three occasions. Unfortunately, no rectal examinations were done; but in retrospect, it appeared quite probable that the primary lesion was a "hidden chancre" of the rectal area. The frequency of infection in this individual is indicative perhaps of the promiscuity of homosexuals seen (but not always recognized) in private practice.

It becomes apparent that syphilis may play a significant part in the history of the homosexual. The fact that many homosexuals go unrecognized may add further to the problem of diagnosing syphilis in patients with reactive serologic tests but without apparent lesions or history of lesions.[2] A conclusion of "biological false positive STS" might easily be made in these individuals since rectal chancres are generally asymptomatic and unrecognized. Properly and routinely performed rectal examinations, serial utilization of serologic tests (including newer procedures), and skillfully obtained epidemiological information may be of great assistance in arriving at the correct diagnosis in these instances.

CONCLUSIONS

An apparent increase in the transmission of early infectious syphilis through homosexual practices has been noted in the Richmond area and in other parts of the nation.

Homosexuals with venereal diseases are apparently more promiscuous than their heterosexual counterparts.

Control of venereal diseases in homosexuals requires intensive contact interviewing and investigation preferably by skilled and specially trained personnel.

Prophylactic treatment of selected named contacts in addition to treatment of diagnosed cases may bring the chain of infection to an earlier end.

There is a strong possibility that syphilis may be mis-diagnosed Biologic False Positive STS in passive homosexuals because of the absence of visible lesions.

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Top Killer of Aged

Diseases of the heart and blood vessels are the major cause of death among persons over 80, a study conducted at the University of Colorado has indicated.

Dr. R. M. Mulligan of the department of pathology, University of Colorado School of Medicine, Denver, reported on his study of more than 300 deaths in the January American Medical Association Archives of Pathology.

An evaluation of fatal disease of old age should help doctors anticipate and treat ailments among elderly patients at an earlier and more amenable stage.

Autopsies performed on 336 persons who died at Colorado General Hospital between 1940 and 1955 showed 37 per cent died of cardiovascular disease, 16.3 per cent of cancer, 12.4 per cent of infectious diseases, and 12.1 per cent of accidental injuries.

High blood pressure was the leading killer among cardiovascular disorders followed by hardening of the arteries. The most prevalent type of cancer was that of the prostate gland. The most frequently fatal infectious disease was bronchopneumonia.

Heart disease and cancer are the number one and two causes of death among the general population. Cancer of the skin is the most prevalent type among persons of all ages.

The study indicated a higher ratio of heart disease, cancer, and infectious disease among men than women.

The 336 persons included 239 men and 97 women, a ratio of 2.45. The incidence of heart ailments showed a ratio of 3.67, of cancer 3.14, and of infectious disease 3.9.

However, more women than men died of accidental injuries. Of 43 accidental deaths, 24 were women and 19 men. The most frequent locale of the accident was the home (37 cases) and the most frequent type was a fracture (36 cases).

The figures also showed that there was at least a 50 per cent chance that the primary cause of death would be many of the cardiovascular diseases, cancer, an accidental injury, appendicitis, or diabetes mellitus.

Pathways of Disease

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This is an analysis of autopsy findings in a general hospital. It covers a thirty month period and includes 137 autopsies.

THE PURPOSE of this paper is to present a resumé of the autopsy service of the Lewis-Gale Hospital covering the first thirty months that I served as its pathologist and to relate some of the most useful and challenging experiences arising during that period. It is hoped that this will serve as evidence that the case does not necessarily die with the body and that, after death, much may remain that is both stimulating and enlightening. To re-emphasize the importance of the autopsy would be trite but to proclaim the pleasurable satisfaction consequent to examination and demonstration of disease processes should serve as a stimulus to those who have an interest in the mechanisms of disease and who care enough to wonder what and why.

MATERIALS AND METHODS

During the period of time covered by this report 137 autopsies were performed, 20 of which were carried out on infants that expired during the neonatal period. Exclusive of the brain, all autopsies were complete except in four instances. Except in instances where specific instructions to examine the brain were obtained, this organ was omitted in order to avoid misunderstanding with the family of the deceased concerning exactly what would be included in a postmortem examination. Practically all tissues from adults and children were fixed in Zenker's solution. Tissues from newborn infants were fixed in 10% neutral formalin. All autopsies on babies were carried out before embalming, but occasional adult bodies were embalmed intra-arterially prior to autopsy. Embalming before autopsy was avoided as much as possible for the following reasons: 1. bacteriology is rendered useless or unreliable, 2. the weight of organs may be altered, 3. gross examination of lesions is handicapped, and 4. the evaluation of gross intravascular clotting is rendered untrustworthy. For the sake of good relations with the morticians, the arch of the aorta was not removed except in instances of either suspected congenital heart disease or disease of the aortic arch and its branches. When possible, bacteriological cultures were carried out on lesions suspected of being infectious. The autopsy diagnoses have not included components of retrogressive changes. For the purpose of this paper the results have been divided into four general categories: 1. chief causes of death of those other than the newborn, including several entities which are of no statistical importance but are worthy of mention, 2. chief causes of death of the newborn, 3. incidental diseases of statistical importance and scientific interest, and 4. diseases deserving special consideration.

RESULTS

Chief Causes of Death of Those Other Than the Newborn.

The big four chief causes of death of those other than the newborn were cancer, heart disease, thromboembolic disease and renal disease in that order of frequency. Forty-eight per cent of all deaths, exclusive of newborn, have been accounted for by these four groups. It should be emphasized at the very outset, however, that these data represent autopsy diagnoses. Although they are as accurate, anatomically and bacteriologically, as I have been able to make them, one must keep constantly in mind that the figures are based on an autopsy percentage representing only 25% to 35% of the hospital deaths.

Cancer—Twenty-three cases or 20% of all deaths* were due to cancer. This may be a bit surprising, for—I believe—the American Heart Association states that heart disease is the leading cause of death. Certain hidden factors, such as an unusual interest in this group on the part of the clinician

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* Unless otherwise designated "all deaths" infers those exclusive of newborn.

and/or more willingness on the part of relatives to have malignant diseases investigated, might be responsible. These figures, remember, include only those instances in which cancer was the primary cause of death and does not include malignant tumors found incidentally. The colon was the most frequent primary site and accounted for four deaths. Next in frequency was the lung (bronchi) with three cases and leukemia three cases. In the remaining thirteen instances, the primary sites and type of malignancy were variable and to give the frequency of the sites would be to list the cases. In this connection, there have been two instances wherein two primary carcinomas existed simultaneously in the same individual. One of these individuals died of disease apparently unrelated to either of the malignant lesions and is not included in the above statistics. In this latter case, there was a mucinous carcinoma of the appendix and a renal cell carcinoma of the right kidney. To add to the excitement of this case, there was also an islet cell adenoma, a focus of adenomatous hyperplasia of a pancreatic duct, a small papillary serous systadenoma of the ovary and an endometrial polyp. The second case died of squamous cell carcinoma of the vagina, but she also had a noninvasive adenocarcinoma of the cecum. Although the latter lesion bears histologic resemblance to an adenomatous polyp, it was 3 cm. in diameter, not pedunculated and possessed an elevated, serpingous border and probably should be regarded as noninvasive carcinoma. The different lesions in these two patients are dissimilar enough that no one could question the obvious histogenetic difference.

Heart disease—Coronary artery disease, with the related myocardial changes, accounted for fifteen of the sixteen adult deaths due to heart disease. There was one additional death due to congenital heart disease. Thus, the heart accounted for 14 per cent of all deaths. Ten of this group died with recent myocardial infarcts and five with old infarcts. Three of the five with healed infarcts had ventricular aneurysms, and all five died in congestive heart failure. The one case of congenital heart disease was an Eisenmenger's complex occurring in a 47 year old man who was recuperating from a gastrectomy. This man died under one of the most unusual of rare circumstances which is the delight of the pathologist, the misfortune of the patient and plight of the surgeon: a paradoxical coronary artery embolus. The latter appeared to have arisen from thrombosed veins of the peri-prostatic plexus, passed through the interventricular septal defect and lodged in the orifice of the circumflex artery and resulted in sudden death. A lesion such as this is difficult to convincingly document and must be seen at the autopsy table to erase any doubts which might be engendered concerning its validity.

Thrombo-embolic disease—Thrombo-embolic disease, the third most frequent cause of death, occurred with surprising frequency and accounted for eleven deaths (9% of the total). The lung was by far the most frequent site (six cases). In some instances the emboli appeared to have arisen from the thrombosed peri-prostatic plexus and adjacent large veins, and even less frequently from the heart, but in most instances the site of origin was not determined. Rarely, swelling of one or both legs indicated the probable source.



Fig. 1. Distal aorta, including the bifurcation—longitudinal section. The lumen is completely filled with thrombus.

There was one instance of Lariche syndrome (thrombosis of the distal aorta) occurring in a man in his late forties. (Fig. 1) This man apparently was an alcoholic, and a reliable history was not obtainable.

Renal disease—Nine deaths were due to renal dis-

ease (7.2% of all deaths). There were three deaths each due to glomerulonephritis, acute pyelonephritis and arteriolonephrosclerosis. These include one instance of malignant nephrosclerosis and one of acute glomerulonephritis. Not included in the above group was an elderly woman who died in renal failure due to polyarteritis nodosa and an elderly man who died with myeloma nephrosis. The latter two will be discussed later.

Right ventricular hypertrophy—A greater or lesser degree of isolated right ventricular hypertrophy was diagnosed in six cases, a frequency of approximately 5%. In three of these cases, the cor pulmonale was regarded as the primary cause of death (2.5%). In none of these six cases was the diagnosis of right ventricular hypertrophy and/or failure established prior to autopsy, emphasizing the difficulty in recognizing this condition clinically.

Cerebrovascular disease—There were eight deaths due to cerebrovascular disease, including three who had basilar artery thrombosis or insufficiency as the chief diagnosis. Three of these patients, or approximately 35%, died following pulmonary aspiration with or without bronchopneumonia. Aspiration appeared to be a terminal event and is included only to point out the mode of exit of many of this group of patients.

Miscellaneous causes of death—The remaining causes of death were varied and of insufficient frequency to be of statistical significance except for those due to infectious diseases and those occurring in newborn infants which will be discussed below.

Death probably due to bacterial endotoxin shock —Most students of infectious diseases are aware of the changing pattern of this group that has occurred since the introduction of the various chemotherapeutic drugs and antibiotics. Two of the bacterial infections that have come to the fore are those due to the Staphylococcus and those due to gram-negative bacilli.

Concerning the gram-negative bacillary infections, four cases have come to autopsy which were characterized, clinically, by sudden onset of chills and fever followed by a profound drop in blood pressure and cyanosis. Those who observed these cases were impressed by the remarkably clear sensorium in spite of the grave state of the patient. These four patients died two hours, six hours, sixty-two hours, and ninety-six hours respectively following admission. One died with acute hemorrhagic pyelonephritis due to Proteus morganii. (This same organism was also cultured from the urine prior to death.) A second died of acute pyelonephritis from which cultures were not obtained. A third died following spontaneous rupture of the colon and extravasation of the feces into the peritoneal cavity. The fourth died with generalized fibrinous peritonitis arising from a pelvic abscess secondary to carcinoma of the sigmoid colon. Although cultures were obtained from only one of these cases, the one with rupture of the colon and the one with peritonitis secondary to a pelvic abscess were probably both associated with rather heavy contamination of the peritoneal cavity with enteric bacteria, principally gram-negative bacilli. The fourth and final case of this group was acute pyelonephritis and, on the basis of probability, was most likely due to gram-negative enteric bacilli, for the latter was by far the most frequent cause of urinary tract infections during this thirty-month period. One of these cases, certainly, and three, probably, represented endotoxin shock in the human adult. The reaction of dogs to lethal doses of endotoxin, as reported by Weil and Spink[1], bears distinct similarity to the reactions observed in this group of patients. These are mentioned because of the similarity of the clinical aspects and course and of the probable close relationship of the basic etiologic agent or agents. This experience corresponds closely with that of Hall and Gold[2] who reported thirty-five patients with shock due to bacteremia. Of their cases of shock, thirty-four per cent were caused by the gram-positive cocci and sixty-six per cent by the gram-negative bacilli. Six of their series had bacteremia of over 100 organisms per ml. of blood; all of these died regardless of treatment. The remaining twenty-nine cases had less than 100 organisms per ml. of blood and suffered a mortality of 41%. They felt that appropriately selected chemotherapeutic agents and/or antibiotics were important issues in the salvage of patients from the latter group. It is of interest that a minority of their patients were cyanotic, but all of those so affected had bacteremia due to gram-negative bacilli.

Fungus disease—There were two adult deaths due to fungus disease in which the organism was both cultured and identified in the tissues. One was due to the Cryptococcus Neoformans affecting principally the brain and meninges, and the other was due to the Histoplasma Capsulatum affecting principally the lungs. In each instance, there was some degree of generalized dissemination of the fungus. The death due to Cryptococcosis occurred in a native of Roanoke County and that due to Histoplasmosis occurred in a life-long native of Christiansburg.

Diseases characterized by hyaline membrane formation—There is another interesting group of diseases which has been recognized at autopsy in this group of cases, all of which were characterized by pulmonary hyaline membrane formation. These cases do not seem to be distinguishable on anatomic grounds alone but only by exclusion and by correlation with other data. These four entities include: 1. hyaline membrane disease of the newborn, 2. rheumatic pneumonitis, 3. influenzal viral pneumonitis, and 4. radiation pneumonitis.

Hyaline membrane disease of the newborn is

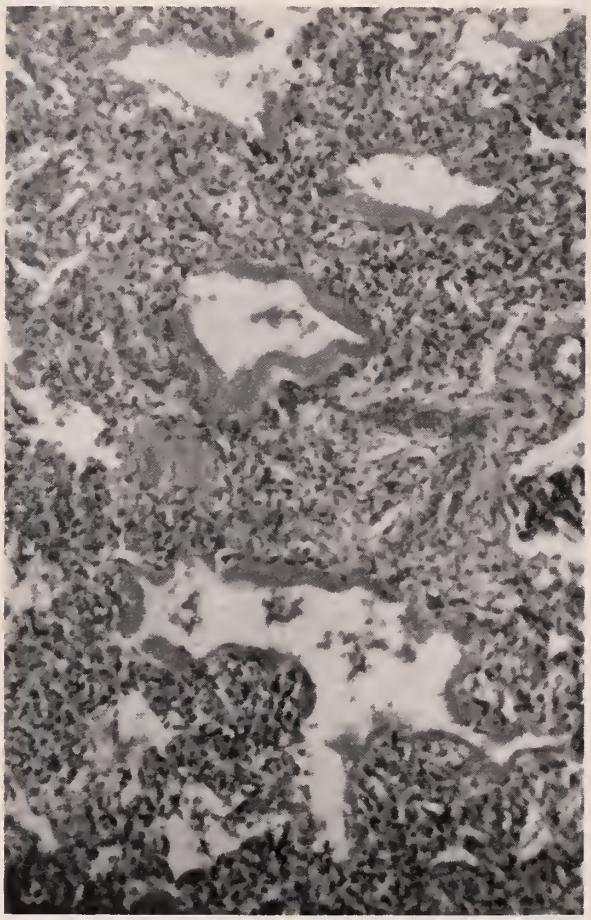


Fig. 2. Lung. Hyaline membrane disease of the newborn. Hyaline membranes line the dilated alveolar ducts. Most alveoli are collapsed. Hematoxylin and eosin. Reduced ⅓ P from mag. X120.

arrived at by the findings of immaturity, a history of progressive respiratory embarrassment, commencing at varying intervals following birth, and the histologic findings of pulmonary atelectasis and hyaline membranes lining the alveolar ducts. (Fig. 2.) (This will be further discussed under causes of death of the newborn.)

The diagnosis of rheumatic pneumonitis is arrived at by the co-existence of other more specific lesions of the disease together with the appropriate history and the presence of pulmonary hyaline membrane formation and pulmonary edema. The one case of this disease was that of a 17-year-old youth who had had recurring episodes of acute rheumatic carditis for several years and on the final admission presented findings interpreted as representing congestive heart failure. At autopsy, the alveolar ducts and alveoli were lined by prominent eosinophilic membranes. There were no findings indicative of acute carditis and the degree of heart failure did not seem sufficient to explain the pulmonary edema.

The diagnosis of pure influenzal viral pneumonitis is suggested by the histologic identification of pulmonary hyaline membranes, the exclusion of the above two diseases and the lack of a history of exposure to x-rays. Louria and associates[3] reported an account of their investigation of the 1957-1958 pandemic of influenza. They isolated and identified the virus in 14 instances from the lungs of those who died with acute respiratory disease. The histologic findings in the lungs were characteristically those of hyaline membranes of a similar nature to those described by Goodpasture[4] during the 1918 pandemic. In the Department of Pathology at this hospital we had the privilege of performing a postmortem examination on four adult bodies in the fall of 1957 and two additional ones in the summer of 1958 who had pulmonary hyaline membranes of the sort described in connection with the 1918 pandemic and again more recently.[3] In some there was superimposed bronchopneumonia. Although viral studies could not be carried out, this photomicrograph illustrates what was interpreted as the pure lesion of viral influenza as it affects the lung. (Fig. 3.) The alveolar ducts were dilated and lined in part by hyaline membranes. It is of interest that at least 50% of these cases had other debilitating disease: two had disseminated carcinoma and another had rather severe trauma sustained in an automobile accident.

The fourth disease in this series characterized by pulmonary hyaline membranes is radiation pneumonitis. We had the unusual privilege of observing this lesion in two stages occurring simultaneously in the two lungs of one body that was autopsied. The history correlates so beautifully with the anatomic findings that I should like to digress momentarily and relate it briefly. This was a 57-year-old white woman who had had a right radical mastectomy because of carcinoma of the breast with axillary node metastases. After the appropriate interval, she was given the prescribed course of x-ray therapy

to the region. This was done four months prior to death. Approximately six weeks prior to death a small mass was discovered in the left breast. Because the latter was thought to represent a recurrence,

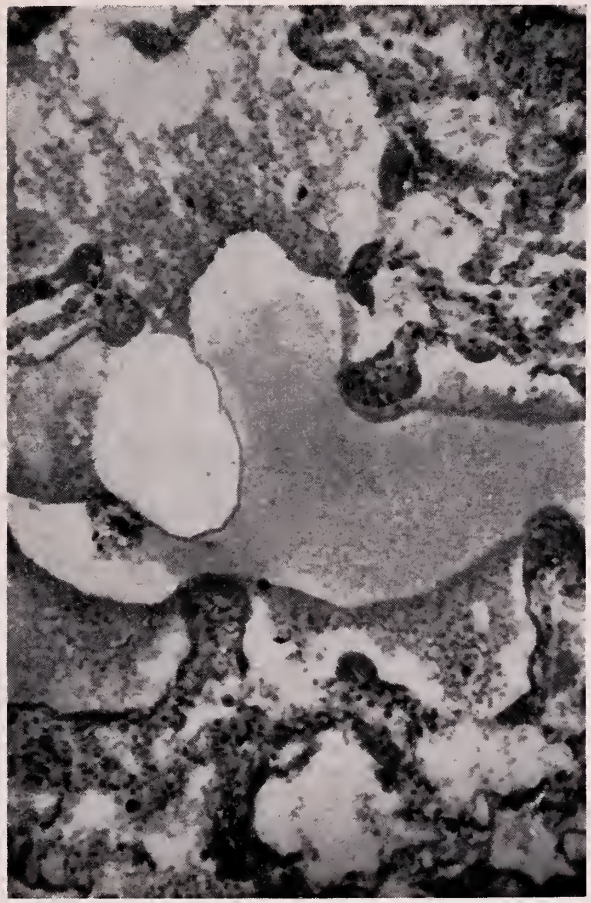


Fig. 3. Lung. Influenzal viral pneumonitis. The alveolar ducts are dilated and filled with edema fluid. Note paucity of cellular exudate. Hyaline membranes are not continuous. Hematoxylin and eosin. Reduced ⅓ X from mag. X120.

she was given one x-ray treatment over the left breast. Approximately two weeks later she returned for further treatment but, because her temperature was 102 degrees, she was sent back home without it. Her family doctor treated her for "pneumonia", but in spite of the treatment her condition gradually worsened and she was returned to the hospital three weeks later. She died four hours following admission. The right lung over which she had x-ray therapy four months before was characterized by thickening and edema of the alveolar septa and extensive organization of exudate within the alveoli. Frequent monocytes possessed enlarged, hyperchromatic nuclei. Occasional small arteries demonstrated thickening, edema and reticulation of the intima similar to that usually noted in vessels which have been exposed to x-rays. Occasional hyaline membranes remained. The left lung, over which x-ray was given four weeks previously was characterized by extensive hyaline membrane formation but lacked evidence of organization and signs of radiation effect on the macrophages and small vessels. Without diving into the pool of controversy concerning the interpretation of these lesions, we must hurry along.

At any rate, these four groups of cases gave the Department of Pathology a most exciting and stimulating diversity of etiologic agents which are capable of producing similar pulmonary lesions and serve to further confirm the relative nonspecificity of the lesion referred to as pulmonary hyaline membranes. The etiology of any of the above group might be challenged on the basis of morphology alone.

Chief Causes of Death of the Newborn.

Twenty autopsies were performed on infants dying during the neonatal period or before leaving the hospital following delivery. In seven of these (approximately 35%), the principal, and usually only autopsy finding, in addition to immaturity was the presence of hyaline membranes lining the alveolar ducts. Five of these infants weighed between 1,400 and 2,300 grams at birth, and no birth weight was given in two. This corresponds closely with Potter's[5] figure of 40% incidence of hyaline membrane disease occurring in infants weighing between 1,000 and 2,500 grams autopsied at the Chicago Lying-in Hospital during the ten year period between 1939 and 1949. In every case of our series more than one of the following criteria of immaturity were present: 1. excessive hepatic hematopoiesis, 2. immaturity of the subcapsular renal glomeruli, 3. excessive lanugo, and 4. smallness of measurements. (The period of gestation is not regard as a reliable criterion of maturity.) The disease was not encountered in a single infant that could be considered mature. In fact, the signs of immaturity were so constant that during the last eighteen months covered by this report, the principal diagnosis was stated as "immaturity with hyaline membrane formation". The hyaline membranes were regarded as a sign of pulmonary immaturity rather than as a disease entity per se. (Fig. 2.)

The most frequent cause of death of the *mature* newborn infants was that of the infectious diseases. There was a total of eight, an incidence of 40% in this group. In four of these the agent was identified. Three died of pneumonia, the agent being candida

albicans, pseudomonas aeroginosa and coagulase positive Staphylococcus aureus, respectively. The fourth death was due to mucormycosis involving principally the stomach.[6] The group in which the agent was not identified all died of pneumonia. Three of these seem to fulfill the criteria set down by Potter[5] for neonatal pneumonia, and the remaining one was regarded as intrauterine in origin because of the early death (24 hours), the absence of fibrin and the amount of cellular debris within the alveoli.

There were two infants dying in the neonatal period because of congenital heart disease. In one there was complete transposition of the great arterial



Fig. 4. Sketch to illustrate the vascular arrangement in transposition of the great arterial trunks.

trunks. (Fig. 4.) This infant died at the age of 42 hours. From a functional standpoint, this was essentially a two-chambered heart. The only blood reaching the lungs was that which passed through the bronchial arteries and that which escaped though the foramen ovale and ductus arteriosus. The direction of flow through these two openings was probably variable, depending upon the relative pressure of the blood in the two atria on the one hand and the aorta and pulmonary artery on the other. The overwhelming amount of blood entered the right atrium and passed into the right ventricle and out the aorta without ever reaching the pulmonary circulation. The second was endocardial fibroelastosis. (Fig. 5.) The latter is regarded as an idiopathic thickening



Fig. 5. Heart. Endocardial fibroelastosis. Left ventricular cavity contains large mural thrombus and is the site of greatest endocardial thickening.

of the endocardium due to excessive formation of both collagenous and elastic fibers. Death is usually due to congestive failure because of the mechanical interference of the leathery endocardium to both filling and emptying of the heart. It usually affects the chambers unequally.

By way of summary of the neonatal deaths during this period of time, one might correctly state that, exclusive of the immature infants, by far the most frequent cause of death was the infectious diseases. No death due to birth trauma was observed.

Incidental Disease of Statistical Importance and Scientific Interest.

Neoplasia of the colon—Except for two instances of advanced autolysis of the bowel, the entire gastrointestinal tract was opened and inspected in every complete autopsy. Out of this effort came the following interesting and significant data. Exclusive of the four cases of carcinoma of the large bowel already mentioned as the primary cause of death, there were five instances of carcinoma of the colon that were purely incidental findings unrelated to death and apparently asymptomatic. There was one additional carcinoma of the appendix. Two of the bowel carcinomas were malignant polyps. Including those which were the primary cause of death, there were nine instances of carcinoma of the colon, an incidence of approximately 8% of all autopsies,

irrespective of age, excluding the newborn. These lesions were widely distributed. There was one of the cecum, one of the rectum and seven were scattered at random between these points.

As a corollary to the above figures, there were fifteen instances of single or multiple adenomatous polyps of the colon. Two of these were located in the rectum and the remainder scattered at random. The polyps were usually multiple. One had a small focus of histologic carcinoma. These lesions have been regarded as second only to carcinoma in the field of neoplasia, for there seems to be reason to believe that most adenomatous polyps of the colon are potential carcinomas and, if unmolested long enough, will eventually become invasive. Instances in the surgical pathology material have come to our attention wherein a pedunculated polyp has become twisted or pulled in such a fashion as to compromise its blood supply with resulting infarction and perhaps cure of the lesion.

Including both carcinoma and adenomatous polyps of the large bowel, there was a total of twenty-five instances wherein one, or both, of these lesions existed. This is an incidence of 22% of all autopsies, exclusive of the newborn. Note should be made that this autopsy series includes a relatively large number of elderly individuals and that these lesions were not common before the age of sixty years. These rather astounding figures serve to point out the importance of keeping in mind the likelihood of neoplasia of the large bowel, especially when examining patients past sixty years of age. The need to examine the large bowel from anus to cecum is obvious, for it has not been our experience, with the autopsy material, that a large percentage of carcinomas of the bowel are within reach of the examining finger or even the sigmoidoscope. These data also indicate that if one waits for symptoms to become manifest, the colon may be sadly neglected.

At the risk of overworking this particular region, the case of spontaneous rupture of the colon might be elaborated even though it was included in the primary diagnoses already discussed. This occurred in an 88 year old women who was admitted in a state of shock complaining of severe left-sided abdominal pain which radiated to the chest. She expired two hours following admission and was found at autopsy to have an encircling carcinoma in the mid-descending colon producing partial obstruction. Nine centimeters proximal to that lesion there was a longitudinal rent in the bowel wall measuring 9 cm. in length, through which a large quantity of formed feces had escaped into the general peritoneal cavity. (Fig. 6.) Section taken from the margin of the perforation revealed no histologic alteration of the bowel wall. We are not aware of previous

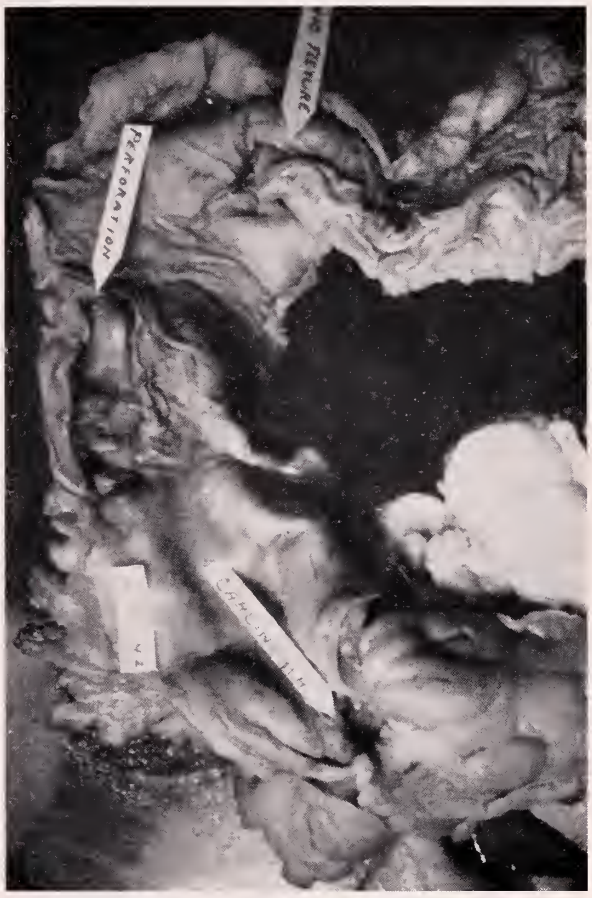


Fig. 6. Colon. Opened to expose the mucosal surface. The dark central area of the carcinoma is ulcerated. No histologic alteration of the site of perforation was found.

reports of spontaneous rupture of the normal colon as a complication of carcinoma, although it must have occurred.

Lesions of the small bowel—The infrequency of neoplasia of the small bowel is in striking contrast to the frequency of this disease of the colon. In this series, there were two benign pedunculated lipomas of the duodenum, one adenoma of the ampulla of Vater and one carcinoma of the duodenum. The latter appeared to arise from Brunner's glands. Thus, malignant disease of the small bowel was one-tenth as frequent as that of the large bowel.

Congenital anomalies of the bowel—There were six instances of Meckel's diverticulum, an incidence of less than 5%. In none of these cases was there evidence of previous inflammation, ulceration or other complications concerning this structure. There

was one small duplication of the ileum found in a newborn. The latter was usual in that its musculature was continuous with the musculature of the adjacent ileum, and its lumen did not communicate with that of the bowel.

Hypoplasia or atrophy of the thyroid—Two instances of total atrophy and two of marked hypoplasia of the thyroid were found at autopsy. One of each was found in women who had had an hypophysectomy because of metastatic carconoma of the breast, but there was also one of each to which no cause could be ascribed. None of these four cases was taking thyroid; yet none demonstrated evidence of clinical hypothyroidism. There seems to be a glaring gap in our knowledge concerning correlation of structure and function of the endocrine glands in general and the thyroid gland in particular.

Diseases Deserving Special Consideration.

First under this category is included one case of plasma cell myeloma that occurred in an 82-year-old man who was admitted in renal failure. His chief complaint was an "upset stomach" of two months duration which followed an attack of "flu". Nausea and vomiting had existed for two weeks prior to admission. He died in marked azotemia on the eleventh hospital day. X-ray studies of the bones revealed only osteoporosis. The hemoglobin was not significantly reduced, but there was a reversal of the albumin to globulin ratio, and Bence-Jones protein was present in the urine. The significant findings at autopsy were large numbers of plasma cells in the bone marrow and extensive plugging of the renal tubules by protein casts, presumably Bence-Jones protein. (Fig. 7.) The cause of azotemia in patients with plasma cell myeloma is generally regarded as being due to the mechanical blocking of the renal tubules by these dense casts; that seems to be true in this case, for there were no additional significant renal alterations to account for the azotemia. This is an entity which deserves to be included in the differential diagnosis of renal failure in the elderly individual.

Polyarteritis nodosa—There was one other patient who died in renal failure, who, at autopsy was found to have polyarteritis nodosa. This is not an uncommon mode of death of patients with this disease. No other deaths due to any of the collagen diseases were observed.

Carcinoma of the prostate—In spite of Dixon's and Moore's contention[7] that carcinoma of the prostate is present in 20% of men past forty years of age, only three cases of carcinoma of the prostate were recognized in this series. This is an incidence of approximately 2.5%. Although each prostate was serially sectioned in the gross, only one to two blocks were usually taken. Moore and Dixon, no doubt, took many more blocks in investigating this lesion, and the great difference in their figures might be due, in part, to method. The three cases in our series were invasive carcinoma, and all were lesions about which there could be no doubt concerning the diagnosis.

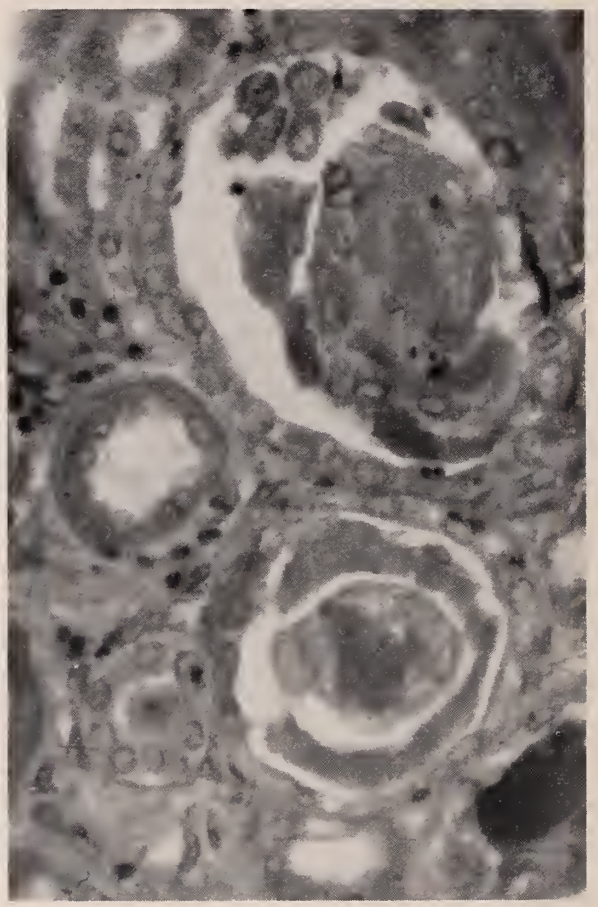


Fig. 7. Kidney. Tubules filled with Bence-Jones protein casts. Multinucleated cell masses surrounding the casts are discernable. Hematoxylin and eosin. Reduced ⅓ X from mag. X725.

Pancreatic duct hyperplasia—Finally, I should like to direct attention to the pancreas. It seems that a description of pre-malignant conditions or lesions of the pancreas is largely a neglected subject, or such lesions do not occur. With this fact in mind, some extra effort was devoted to the histologic study of the three sections of this organ which were routinely taken. The frequency with which pancreatic duct hyperplasia (Fig. 8) and/or duct papillomas

have been demonstrable is surprising. Only during the last twelve to eighteen months covered by this report has this effort been underway and at least ten instances of these lesions have been observed.

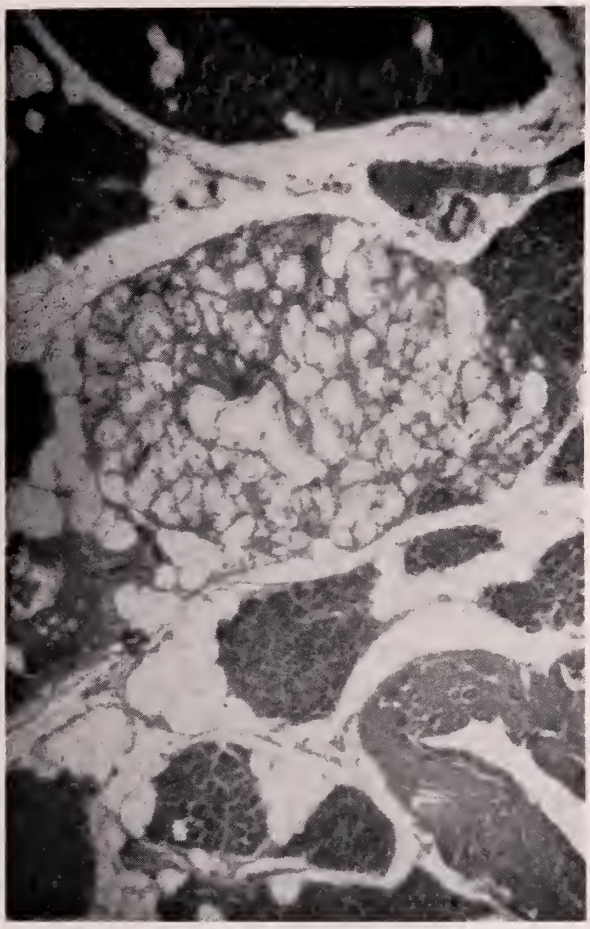


Fig. 8. Pancreas. Focus of adenomatous hyperplasia of a pancreatic duct. Hematoxylin and eosin. Reduced ⅓ X from mag. X120.

This is an incidence of approximately 10%. It is not the purpose at this time to designate these are pre-malignant lesions but rather to direct attention to their presence and to indicate their frequency.

SUMMARY AND DISCUSSION

A statistical review of the autopsy service of the Lewis-Gale Hospital covering a period of 30 months is presented. Some diseases or groups of diseases have been elaborated upon. The outstanding observations have been:

1. The frequence of cor pulmonale and the difficulty in making a clinical diagnosis.
2. The high incidence of carcinoma and/or adenomatous polyps of the colon.
3. The changing pattern of the infectious diseases.
4. The frequence of hyaline membrane disease as a cause of neonatal death of the immature.
5. The frequence of pancreatic duct hyperplasia and/or intraductal papillomas.
6. The relatively low incidence of carcinoma of the prostate.

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Tobacco Amblyopia

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One of the less publicized dangers to tobacco smokers is discussed in this paper.

IN ALL THE HEATED CONTROVERSY concerning the possible bodily harm from tobacco, I have not seen one word on tobacco amblyopia; but if my findings in a small town and country practice are any indication of what is going on over the rest of this country, there must be hundreds of smokers well on the way to industrial blindness, if they have not already reached that point.

Of course, we all know that thousands and thousands smoke all their lives with no apparent harm except the formation of a drug addiction whose shackles are often very hard to break, for the confirmed smoker is just as much of an addict to nicotine as the poor Chinaman to his opium pipe.

We are all aware of the very great difference between individuals as to their reaction to a given exciting cause. One man can eat poison ivy with impunity. Another will be made miserably sick if he passes through the smoke from a fire in which some of the vine is burning. So with tobacco. Most men seem immune to its harmful effects; *many are not.*

In my work, I find two distinct classes of trouble —one, a series of sudden black-outs, probably caused by constricting spasms of some of the cerebral vessels. In the past few months, I have seen four of this type. A good example was that of a big, strong trailer truck driver. He said, "When driving, suddenly, everything goes black before me. I can't see a thing and have to get off the road as best I can and wait till my sight comes back." I begged him to stop his cigarettes and he promised to do so. He came in again telling me, "It was the hardest thing I ever had to do, but I have not had a black-out since I stopped." No one will ever know how many of the awful wrecks on our roads are the result of such black-outs, and to an engineer with his hand on the switch of a Diesel at 60 to 70 miles per hour, a black-out of only a few moments can easily mean disaster.

Not all of these cases are binocular. In instances when only one eye is involved, often the upper extremity of the same side is paralyzed. About two hours is the longest black-out that I have seen.

The atrophic type shows a slow breakdown of the part of the retina from which the papillomacular fibers originate.

It is very common among our women smokers, showing first dull headache and asthenopia on close work, then definite premature presbyopia.

A patient of 38 came in with no refractive error, but unable to read a line of newspaper type. With a glass 10 years beyond his age, he could do so. Knowing him as a chain smoker, I asked him to stop. In less than three weeks all trouble disappeared.

But if these cases progress, little by little a central scotoma for red and green—rarely blue—develops, relative at first, but gradually increasing in density till all perception of central red and green is gone. The scotoma is oval in shape, extending from the fixation point out to the blind spot. It rarely invades the rest of the color field. By this time, central visual acuity is slipping, and the portion of the optic nerve filled by the papillomacular bundle begins to have a dull lifeless look. The lower temporal quadrant is involved, and before long the patient will be industrially blind.

But fortunately, if they will really stop smoking, the recovery is gratifying. A man of 50 came with this story. "My eyesight is gone, I have lost my job, no one will hire me, I have a family to care for, and I have nothing." He showed a typical late tobacco eye, and I begged him to stop. He did, and not long ago he came in, the happiest man I have seen for a long time, vision completely restored. He said, "I have the best job I ever had in all my life." These cases usually take two to three months to recover.

Another was a man of 62. One of the best eye men in Virginia had told him his eyes were hopeless and that he was going blind. Not liking this verdict, he went to Philadelphia, where he saw two ophthalmologists known all over the world. Both informed

him that nothing could be done. "Go home and learn to be blind." After hearing his story, I told him that I could not possibly do anything for him that those men had not already done. He said, "Well, I want you to see my eyes any way.

I shall never forget, as I got close to his face to look into his eyes, the tobacco odor was so strong I said to myself, "If he hasn't tobacco amblyopia, he has missed an awfully good chance." The case was typical. I said, "Mr. L., are you willing to carry out instructions?" "I'll do anything on earth you tell me," he replied. "All right, don't touch tobacco for three months and then let me see you." Three months later he walked in, a different looking man, with good uncorrected vision of 20/30, and could read anything he chose without a glass. A little myopia, with which tobacco had nothing to do.

The reason that I wish to bring this utterly unsurgical subject before this gathering is this. If in your triennial examinations you find a man in the early forties with definite premature presbyopia, even if he passes the Ishihara color test with apparent ease, do not fail to study carefully his central field for red and green; and if you find even a relative scotoma, refuse that man unless he will promise to quit smoking; for if he does not, inevitably the density of the scotoma will increase, but so slowly and insidiously that the central perception for red and green will be all gone and he can easily pass a danger signal without seeing it at all, especially if the visibility is poor.

If you do have to hold up any of these men, you can do so with perfect assurance that vision will be back in a few weeks, or a month or two at the most, if they will stop smoking.

In fairness to the tobacco people, I will say that the advanced cases are all in long time smokers, and the cigar is the worst offender, though the cigarette is by no means clear, as you may remember from the history of our school bus driver. Moderate smoking of mild tobacco does not seem to do much harm, but I hate to see our whole nation made slaves to the cigarette habit.

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How to Revive Heart

All surgeons should be required to learn heart resuscitation before operating, according to a South Carolina doctor. Dr. William E. Bomar, Jr., of the Department of Surgery, Greenville General Hospital, pointed out that statistics show an apparent increase in the number of cases of cardiac arrest during surgery and said "adequate knowledge of the accepted methods of cardiac resuscitation should be a prerequisite for operating privileges, regardless of the specialties concerned."

Writing in the January 2 issue of the Journal of the American Medical Association, Dr. Bomar said a combination of factors undoubtedly plays some part in causing a patient's heart to stop during an operation.

"Many people blame the use of intravenously given barbiturates and muscle relaxants, others the use of too many different combinations of anesthetic gases." However, after analyzing 30 such cases, Dr. Bomar concluded that his study "while limited in scope, points to the lesser importance of anesthetic factors in production of cardiac arrest."

Only four cases involved healthy patients who showed no preoperative warning symptoms, while "in all other cases, serious pre-existing diseases . . . was present."

The proper preparation of the patient before an operation is of the utmost importance despite advances in anesthesia.

"The recognition, prevention, elimination, or control of preoperative factors are important influences on the survival rate. Also, the elective-surgery: operative-risk relationship should be adequately and honestly evaluated individually."

Co-authors of the article were Drs. William R. Thompson and John D. Ashmore, Jr., Greenville, S.C.

Olfactory Esthesioneuroepithelioma

Report of a Case

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This case report describes a rare tumor arising from the olfactory epithelium.

IN 1924, Louis Berger, Richard and Luc, reported the first example of an olfactory esthesioneuroepithelioma.[1] Their patient was a 50-year-old man and the lesion was histologically characterized by rosettes and nerve fibrils. There was no evidence of a central neuroblastoma. Berger's tumor was extremely radiosensitive. They considered the tumor to have had its origin from the olfactory placode. Two years later, Berger and Coutard report a similar tumor which occurred in a 32-year-old lady.[2] The latter tumor was devoid of rosettes and the authors interpreted this histologic deviant as representing a more differentiated tumor containing neurofibrils and small round cells resembling neuroblasts and they termed this tumor an olfactory neurocytoma. They believed that the origin of both types of tumor was the olfactory epithelium, the anlage of which is the olfactory placode. The olfactory epithelium consists of sustentacular cells, basal cells (reserve sustentacular cells) and specialized bipolar nerve cells or olfactory cells. Berger believed that the tumors containing rosettes plus neurofibrils (esthesioneuroepithelioma) were less well differentiated and arose from sustentacular cells and primitive olfactory cells, respectively. The tumors that show better differentiation, lack rosettes, and contain neurofibrils and



Fig. 1. X-ray showing opacification of the left antrum, thickening of the ethmoid septa and enlargement of the middle concha with bulging into the right half of the nasal cavity.

small round cells resembling neuroblasts were designated esthesioneurocytomas. The cell of origin, according to Berger, of the latter tumor, is the primitive olfactory cell.

Schall and Lineback, in 1951, reported three cases of primary intranasal neuroblastoma.[3] This was the first report in the American literature. These authors collected fourteen cases from the European literature bringing the total to seventeen cases. Reference to these cases can be found in their bibliography.

Seaman, in 1951, reported a tumor occurring in a 65-year-old white man who had been treated by polypectomy and x-ray therapy.[4] He had received three courses of x-ray therapy, totalling 11,150 r over a seven year period. Seven years after institution of x-ray therapy and 16 years after onset of therapy caused regression in the size of the metastasis during life.[6]

McCormack and Harris assembled five cases from the files of the Cleveland Clinic.[7] They deemed two of these tumors malignant and demonstrated metastasis at autopsy. Both malignant tumors and two of the benign tumors were treated with deep x-ray therapy.

REPORT OF CASE

A 14-year old white schoolboy was well until about nine months before admission when he noticed a swelling in the region of the inner aspect of the left eye. The "swelling" was hard, non-painful, and appeared to be attached to bone. He complained of "stuffiness" of the nose and epiphoria. He consulted

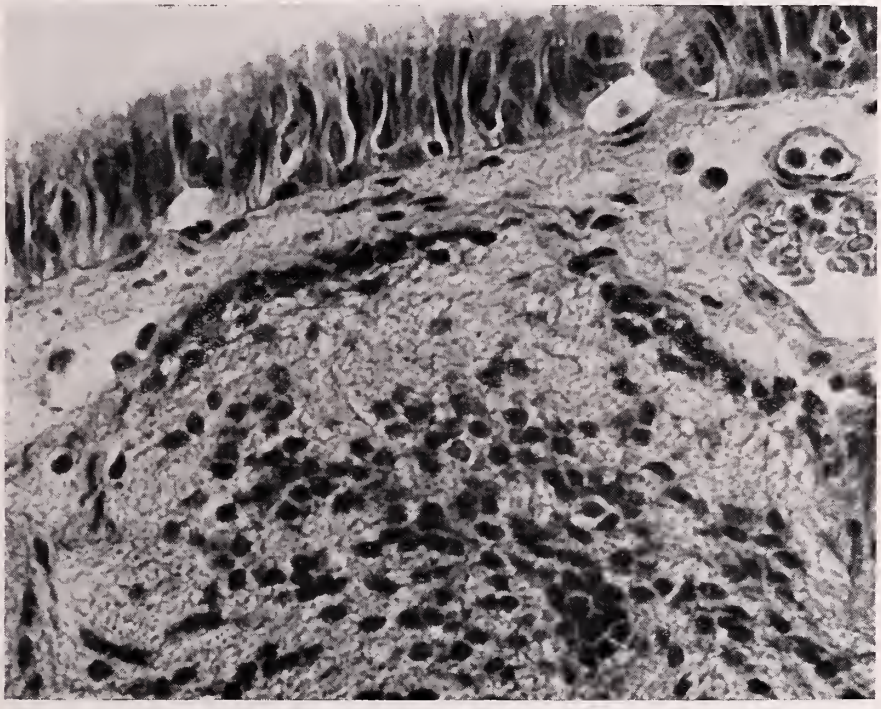


Fig. 2. Note an intact layer of olfactory mucosa overlying typical nests of tumor cells.

symptoms, a unilateral radical neck dissection showed cervical lymph node metastasis and invasion of striated muscle of the neck. Postoperatively he was given 1700 r to two cervical portals and fifteen months later he was shown to have extensive mediastinal metastasis.

Frohling and Wild added four cases, three of which responded nicely to radiation therapy. The other case was not treated.[5]

Fisher's patient died 10 years after initial surgical removal of the tumor and at autopsy the presence of pulmonary metastasis was demonstrated. X-ray

an otorhinolaryngologist who attributed the symptoms to an allergy. During the next four months he received "clearing" treatments to no avail. About one month prior to admission he consulted another physician who detected a deviation of the nasal septum and enlargement of the left middle turbinate which extended through the choana into the nasopharynx. X-rays showed sclerotic changes of the left ethmoid bone with thickening of the septa and irregularity of the bone margins. The middle concha was enlarged and bulged across the mid-line into the right half of the nasal cavity. The medial wall

of the left antrum was thickened. The left antrum was opacified. The medial wall of the left orbit showed slight thickening. (Fig. 1) There was nearly complete opacification of the left middle ethmoid cells.

He was admitted to Alexandria Hospital on September 5, 1957, and the left middle turbinate was resected. The tissue diagnosis was olfactory neuroblastoma (esthesioneuroepithelioma). He was transferred to George Washington University Hospital and a lesion was removed from the maxillary antrum. The operative note reads: ". . . . A midline skin incision was made dividing the upper lip, carried around the left naris to a point 3 cm. inferior to the intercanthal fold. The incision was carried down through subcutaneous tissue. The mucosa was ele-

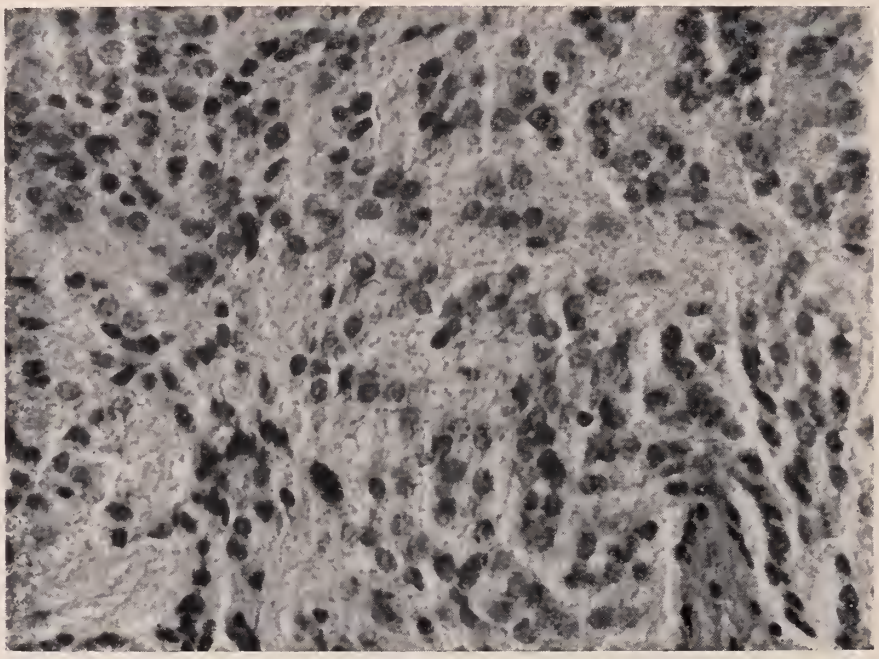


Fig. 3. Photomicrograph showing the remarkable uniformity of nuclear properties with only a rare large nucleus having condensed chromatin. Note the fibrillar stroma.

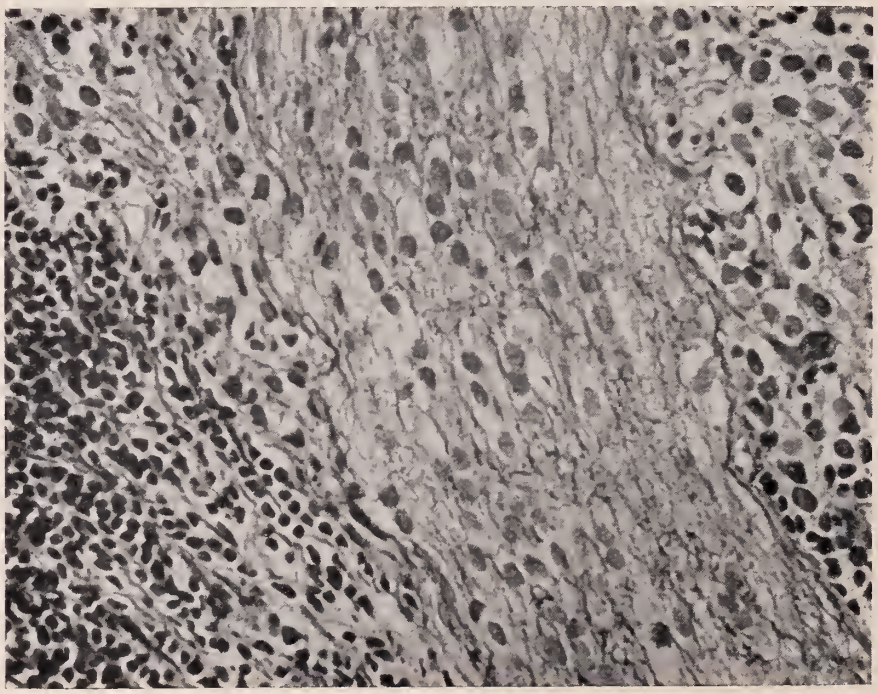


Fig. 4. Holmes stain showing neurofibrils.

vated, thus forming a flap. The opening into the maxillary sinus was made by use of chisel and mallet. The tumor was identified. By use of sharp and blunt dissection and dull curet, the tumor was removed in pieces. A portion of the turbinates was excised. . . .". The postoperative course was totally uneventful and he has remained well until this time. Past history and family history negative. Routine admission blood and urine studies were negative on both admissions.

There is no evidence of recurrence after 22 months.

DISCUSSION

The sections showed an intact layer of olfactory mucosa overlying the tumor. Immediately beneath the mucosa there were sheets and nests of cells having small round to ovoid nuclei. (Fig. 2) The nuclear chromatin was uniformly dispersed in a fine stippled pattern in the majority of the cells. An occasional cell was encountered which had a larger nucleus with condensed chromatin. (Fig. 3) No mitotic figures were found and nucleoli were inconspicuous. The cytoplasms were acidophilic, relatively scanty and cell membranes were indistinct. The matrix surrounding the tumor cells showed a fine fibrillar pattern with H & E stain. Well developed neurofibrils were demonstrated with the Holmes[8] silver nitrate stain. (Fig. 4) The tumor was characterized by the absence of true rosettes, however an occasional pseudorosette could be identified. The stroma was richly vascular and contained a few lymphocytes.

CONCLUSION

A case of an olfactory esthesioneuroepithelioma is reported. This is the 28th case reported in the world literature.

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Oral Cancer Increases in Women

Oral cancer is on the increase among women, according to a study of the records of the Cook County Hospital (Chicago) and the Research and Educational Hospitals of the University of Illinois. In 1930 the ratio of women to men for oral malignancy was as follows: carcinoma of the lip, 1 to 16.2; floor of the mouth, 1 to 18.8; of the buccal mucosa, 1 to 8.5; of the esophagus, 1 to 4.1. In the period 1953 to 1957 at Cook County Hospital there were 46 women and 210 men patients with cancer of the mouth, a ratio of 1 to 4.56. At the Research and Educational Hospitals the incidence of oral cancer in 1944-48 was in the ratio of 1 to 10; in 1954-58 the ratio of women to men was 1 to 4.71. "This increased incidence in women is associated with an increasing use of tobacco by women and suggests a causal relationship. A long duration of exposure to the use of tobacco prior to onset of symptoms is a consistent finding," Drs. Walter W. Dalitsch and Sunder J. Vazirani concluded.—*American Journal of Surgery,* December, 1959.

The Problem of Carcinoma of the Gall Bladder

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The author favors cholecystectomy for asymptomatic gall stones and tumors of the gall bladder. He gives his reasons for this stand and presents five cases of benign tumors of the gall bladder.

CARCINOMA of the gall bladder has been a very difficult problem to treat with the cure rate being only one in forty as stated by Bochus.[1]

Finney and Toms[2] found that 73 per cent of their cases had metastasis at the time of operation. Of the remaining patients with carcinoma of the gall bladder only two were alive three years after removal of the tumor. It would therefore follow that when the diagnosis of carcinoma of the gall bladder can be made pre-operatively or grossly at operation, the prognosis is relatively hopeless.

The following is a brief presentation of the classification of tumors of the gall bladder. They may be grouped as benign and malignant. In the benign group there are papillomas, adenomas, myomas, lipomas, myxomas, fibromas and mixed type of tumors. Also to be included are the cases of cholesterosis of the gall bladder in which the masses of lipid material in the gall bladder wall become pedunculated simulating neoplasms.

Malignant tumors of the gall bladder have been classified as adenocarcinomas, squamous cell carcinomas and anaplastic carcinomas.[8]

Adenocarincomas are the most common, occurring in 81 per cent of 42 primary malignancies of the gall bladder in the series of Finney and Toms.[2] Squamous cell carcinoma occurs in from four to fourteen per cent of primary carcinomas of the gall bladder and anaplastic carcinomas are found at the rate of approximately 12 per cent.[1] Primary sarcomas of the gall bladder occur but are quite rare. Lymphosarcomas, angiosarcomas, myosarcomas and endotheliomas have been encountered.

Carcinoma of the gall bladder extends by direct infiltration and by distant metastasis. The age incidence of this disease is from 21 to 89 years with maximum rate of occurrence being between 60 to 69 years of age. The duration of symptoms was less than three months to more than ten years with no preponderance of number of patients being seen at any time interval. Females are affected at a four to one rate over males.[2]

Below are presented five case reports from the Jefferson and Roanoke Memorial Hospitals of benign tumors of the gall bladder. These cases and the following discussion are presented in an effort to point out possible avenues whereby the treatment of carcinoma of the gall bladder can be improved by being alert to the factors which allow for the prevention and the early diagnosis of malignant tumors of the gall bladder.

CASE REPORTS

Case 1—I.N. This 42 year old white female was admitted to the Jefferson Hospital on May 15, 1953, with the diagnosis of papilloma of the gall bladder found on cholecystogram.

Past history and system review were non contributory.

Physical examination revealed temperature to be 98.6° orally, pulse 98, respirations 20, blood pressure 152/50. The patient was a well developed, well nourished, white female, who did not appear to be acutely or chronically ill. The remainder of the physical examination was unremarkable.

On May 16, 1953, cholecystectomy was carried out.

Pathology report revealed benign papilloma of the gall bladder. Grossly this papilloma measured .6 cms. in diameter. The surface was granular and yellow. The papilloma was attached to the gall bladder by a narrow pedicle. Microscopic examination of the wall of the gall bladder showed the papilloma to be lined by columnar epithelium. There was no evidence of malignant change.

Post-operatively the patient did well and was discharged on May 27, 1953.

Comment

This case represents a patient who was diagnosed

pre-operatively as having a papilloma of the gall bladder which was removed and found to be benign.

Case 2—N.C. This patient was a 59 year old white female who was admitted to the Jefferson Hospital on March 31, 1954 with the history of having had upper abdominal dull, aching pain associated with nausea and vomiting of four months duration.

Past history revealed that the patient had been on Cortisone therapy for arthritis until four months prior to admission. The patient had had an appendectomy five years prior to admission.

System review revealed an allergy to penicillin; otherwise system review was negative.

Physical examination revealed temperature 99.5° orally, pulse 100, respirations 22, blood pressure 160/70. The patient was a well developed, well nourished, white female who appeared to be acutely and chronically ill. Examination of the skin showed some suggestion of jaundice. Examination of the abdomen revealed generalized tenderness without muscle spasm. There was a right lower quadrant vertical incision which was well healed. The remainder of the physical examination was unremarkable.

Positive laboratory findings included elevation of the Serum Bilirubin with predominance of the direct component. An alkaline phosphatase was 23 Bodansky units. Cephalin flocculation was 4+. Urobilinogen was normal. The urine was positive for bile and the remainder of the laboratory examinations were unremarkable.

It was thought that the patient had obstructive jaundice and on April 13, 1954, exploratory laparotomy was carried out with cholescystectomy, exploration of the common duct, duodenotomy and biopsy of the liver being carried out.

Post-operatively the patient did well.

The pathology report revealed chronic cholecystitis, benign polyp of the gall bladder, low-grade hepatitis, cholesterosis of the gall bladder. Gross examination of the gall bladder revealed a small yellow papillary projection 2 cms. in diameter on the gall bladder mucosa. Sections of the gall bladder showed the wall to be thickened, fibrotic and infiltrated with round cells. Projecting from one of the sections was a small papilloma containing sheets of foamy macrophages.

The patient was discharged on May 5, 1954.

Case 3—A.B. This 58 year old white male was admitted to the Jefferson Hospital on February 4, 1956 with the history of having had epigastric crampy pain radiating to the right upper quadrant and into the lower chest. The patient had been hospitalized six months previously and x-rays of the gall bladder and stomach revealed no abnormality. Repeat gall bladder series was done shortly before admission which showed evidence of cholelithiasis.

Past history and system review were non contributory.

Physical examination revealed temperature to be 98.6° orally, pulse 97, respirations 20, blood pressure 95/70. The patient was a well developed, well nourished, white male who did not appear to be acutely or chronically ill. There was no evidence of jaundice. Examination of the abdomen revealed some evidence of tenderness below the right costal margin and otherwise physical examination was completely negative.

On February 7, 1956 cholecystectomy and appendectomy was carried out.

Pathology report revealed benign papillomata of the gall bladder, chronic cholecystitis, appendix.

Microscopic examination of the gall bladder showed the papillomatous projections to be composed of mucosa only. There was no evidence of malignant change.

Post-operatively the patient did well and was discharged February 14, 1956.

Case 4.—M.W. This 63 year old white female was admitted to the Jefferson Hospital on June 27, 1956 because of a Bartholin gland abscess.

Past history was non contributory.

System review revealed a "gall bladder" attack one year prior to admission. Remainder of the system review was non contributory.

Physical examination revealed temperature 98° orally, pulse 98, respirations 18, blood pressure 130/80. The patient was a well developed, well nourished, white female, who did not appear to be acutely or chronically ill. Physical examination was unremarkable except for a mass in the region of the right Bartholin gland.

Admission laboratory work was unremarkable.

On June 28, 1956, when the patient was in the operating room, prior to surgery for the Bartholin gland abscess, the patient developed acute abdominal pain, nausea and vomiting and an irregular pulse. The operation was cancelled.

An electrocardiogram was obtained which was unremarkable except for premature ventricular contractions. A serum amylase was done which was 73 sgo. units which was above the upper limits of normal of 40. On July 5, 1956, a gall bladder series showed reduced concentration in the gall blad-

der indicating abnormal function with evidence of defect in the wall probably associated with calculi.

On July 6, 1956, cholecystectomy, appendectomy and excision of the Bartholin gland, right, were carried out.

Pathology report revealed numerous polypoid projections measuring up to .6 cms. in diameter. In the mucosa of the gall bladder there were several dark, granular calculi measuring up to 2 cms. in diameter. Sections of the gall bladder showed no evidence of malignant change. The glands were numerous and hyperplastic. The stroma was increased in amount and infiltrated with round cells and plasma cells. The polyps appeared to be overgrowths of similar process.

Final diagnosis was benign polyps of gall bladder, chronic cholecystitis, cholelithiasis, Bartholin gland abscess, fibrotic appendix.

Post-operatively the patient did well and was discharged on July 16, 1956.

Case 5—I.F. This 38 year old white female was admitted to the Roanoke Memorial Hospital on October 29, 1958, with the history of having had an episode of right lower quadrant pain, nausea and vomiting five months previously. One month prior to admission the patient had the onset of epigastric pain with radiation into the substernal, neck and shoulder areas.

Past history and system review were non-contributory.

Physical examination revealed a well developed, well nourished, white female who did not appear to be acutely or chronically ill. Examination of the abdomen revealed the liver, spleen and kidneys not to be palpable. There was some tenderness in the right lower quadrant but there was no spasm. There were no masses palpable and no tenderness was noted over the gall bladder region. The bowel sounds were normal. Remainder of the physical examination was completely negative.

Admission laboratory work was unremarkable except for a hemoglobin of 9.4 grams per cent and hematocrit of 36 volumes per cent. The patient was found to have a microcytic hypochromic anemia probably on a nutritional basis. A bone marrow was done which showed normal iliac marrow.

A gall bladder series was done which showed cholelithiasis with good function of the gall bladder. A GI series and Barium Enema showed no abnormality. Electrocardiogram was unremarkable.

On November 6, 1958, cholecystectomy and appendectomy was carried out. The gall bladder was opened at the time of operation and a small polyp was discovered. Consultation with the pathologist revealed that this was probably a benign lesion and no frozen section was thought indicated in that the specimen would be destroyed by freezing. Pathology report revealed minimal chronic cholecystitis and small adenomatous polyp with cholesterosis of the gall bladder. The appendix was reported as normal.

Post-operatively the patient developed thrombophlebitis in the left leg and responded to treatment with anticoagulants. The patient also had an episode of epigastric pain following the onset of thrombophlebitis. However, her serum amylase and chest film as well as electrocardiogram revealed no abnormality. The patient convalesced well and was discharged on November 22, 1958. She has been asymptomatic since that time.

COMMENT

The last four cases represent instances of benign polyps of the gall bladder which were found incidentally at the time of pathology examination.

DISCUSSION

There is no definite proof to indicate whether or not these benign tumors of the gall bladder are premalignant lesions. However, the presence of papillomas is ample evidence of the epithelial proliferative power. In addition, the presence of gall stones and infection are apparently related to the development of carcinoma of the gall bladder.[5]

It therefore follows that cholecystectomy for papillomas of the gall bladder and cholelithiasis is definitely indicated whether symptomatic or not. Jagutis[6] followed 114 cases of cholelithiasis treated conservatively for 10 to 25 years. Five of these developed carcinoma of the gall bladder, 13 died of cholecystic disease, 25 patients were operated on for complications of cholelithiasis and four of these died in the post-operative period.

Carcinoma of the gall bladder accounts for 4.5 per cent of total malignancy deaths,[4] and Graham[7] stated that at least four to five per cent of women of the cancer age who have cholelithiasis will develop carcinoma of the gall bladder. In a series of 239 consecutive operations on the biliary tract[3] the mortality was .4 per cent. Another series reports the operative mortality to be one to three per cent.[7] The instance of carcinoma in the presence of cholelithiasis has been reported in a separate series[3] to be .4 per cent to one per cent. Regardless of which

series is considered it is obvious that the mortality from carcinoma of the gall bladder and other complications of gall stones is greater than the mortality of cholecystectomy.

The other point which should be stressed as an adjunct to early treatment of carcinoma of the gall bladder is the opening of the gall bladder at the time of removal to ascertain whether or not there is any tumor present. If there is a lesion found in the gall bladder, consultation with the pathologist should be obtained to consider frozen sections in order to establish a definitive diagnosis. If a malignancy is detected then wedge resection of the adjacent liver tissue should be done. This has been advised by some to be done with the electrocautery.[4] The treatment of carcinoma of the gall bladder by cholecystectomy without partial hepatectomy has had generally poor results.

SUMMARY

1. The problem of carcinoma of the gall bladder is presented.
2. Five cases of benign tumors of the gall bladder are reported.
3. The relationship between papillomas, stones and infection of the gall bladder to carcinoma of the gall bladder is discussed.
4. The point is made again that cholecystectomy for asymptomatic gall stones and tumors of the gall bladder is indicated as the most definitive prevention and treatment of carcinoma of the gall bladder.
5. The importance of careful examination of the gall bladder specimen at the time of operation and consultation with the pathologist is emphasized as the means of early diagnosis and proper management of curable cases of carcinoma of the gall bladder.

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Medical Testimony

Plans designed to provide impartial medical testimony and speed settlement of personal injury claims appear to be gaining support, according to the Journal of the American Medical Association.

Three out of every four cases on the nation's crowded court calendars require some type of medical report.

The idea that justice is best served by one doctor testifying as an impartial expert rather than two or more doctors presenting differing viewpoints has been endorsed by the American Association for the Surgery of Trauma. The A.M.A. is closely watching the move.

According to the A.A.S.T., nine states have instituted programs whereby authoritative medical and judicial bodies agree jointly to cooperate in securing the testimony of impartial medical experts, or are considering such plans. The states are California, Illinois, New Jersey, Maryland, Massachusetts, Minnesota, Ohio, Pennsylvania, and New York.

"The plan's greatest success, undeniably, is being chalked up in its birthplace, New York City," according to the article in the Medicine At Work section of the January 23 Journal.

"There, where it has been in operation for seven years, recent figures indicate that questionable claims are dwindling and fewer cases are coming to trial. Why? Advocates of the system say it is because lawyers have recognized the proficiency of the physician panel on matters of a medical nature."

C. Joseph Stetler, director of the A.M.A.'s Law Division, said, "Medicine does not feel that a panacea has yet been discovered, however, it does look with interest on such projects and considers them a constructive approach."

Initial Therapy of the Alcoholic

N. E. STRATAS, M.D.
K. T. SCHMIDT, M.D.
Williamsburg, Virginia

This method of treating the acute alcoholic, presented in detail, has given good results.

BETWEEN JANUARY 1, 1959, and June 30, 1959, there were 104 white males admitted to our hospital as inebriates. These patients were admitted and treated during this time by three physicians in the acute treatment service. For the purpose of establishing and evaluating some fairly reliable method of therapy of alcoholics in various stages of inebriacy, we agreed upon a fairly consistent procedure. In this paper we will consider only the initial two weeks of hospitalization.

Our aim was to assist the patient from the acute alcoholic episode through the post-alcoholic period with the least possibility of incurring delirium tremens, convulsions, or other mishaps.

Of the 104 male patients, 95% were patients who had long histories of drinking and who, in most cases, had been seen by other physicians due to prior severe alcoholic episodes. About 30% came in acutely intoxicated; another 25% had been drinking the same day but were not acutely intoxicated; another 25% had not had any alcohol in the previous one or two days; and the remaining 20% had not had any alcohol for from three to seven days. Because of this variation in stage we set up various plans of therapy.

We felt that a patient with acute delirium tremens should be in our hospital building and the following was a typical order sheet:

1) Routine orders. Laboratory work etc.
2) To bed or on a mattress-covered floor.
3) Four-way restraint, if necessary. (Virginia law does not consider the immobilization of a delirious patient as true restraint in the usual connotation of the word.)
4) Sodium Luminal—up to gr. v providing caution used.
5) Sparine—50 to 100 mgm. I.M. or I.V. slowly prn.
6) Dilantin—gr. iii stat and gr. iss t.i.d. X 10 days.
7) Phenobarb—gr. iss t.i.d. X 10 days.
8) Vitamins—I.M. at first, orally later on.
9) 2000 c.c. 5% Glucose in N saline slowly stat and if necessary repeat in next 2 days.
10) Check for infective processes and cover with broad spectrum antibiotics.
11) Severe deliberation—Cortisone or ACTH

The patient who was admitted acutely intoxicated was given something similar to the following:

1) Routine orders.
2) To bed.
3) Dilantin gr. iii stat and gr. iss t.i.d. X 7 days.
4) Phenobarb gr. ss t.i.d. X 7 days.
5) B-complex vitamins 2 cc IM daily X 5 days.
6) Thorazine 50 mgm. IM state if necessary and 50 mgm. orally t.i.d. X 10 days.
7) Multivit. cap i t.i.d. X 2 weeks.

Patients who came in sober were given the following:

1) Routine orders.
2) Dilantin gr. iii stat and gr. iss t.i.d. X 7 days.
3) Phenobarb gr. ss t.i.d. X 7 days.
4) Thorazine 50 mgm orally t.i.d. X 7 days. (Varied in dosage and duration and perhaps Sparine used according to severity of symptoms.)
5) B-complex vitamins 2 cc IM daily X 3 days.
6) Multivit caps. t.i.d. X 10 days.

All patients were closely observed for signs of delirium tremens or convulsions. We were careful to remember that delirium tremens is present at times in patients who appear superficially in good contact. A close immediate follow-up continued over the first two or three days should bring these cases to light. Particular manifestations of this group are periodic disorientation, forgetfulness, mild confusion and episodic delirium which may occur at night and go unnoticed.

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Several important factors were watched for in the history whenever one was obtainable.

(a) Previous history of withdrawal convulsions. Seizures are a real hazard during the first two weeks of withdrawal of alcohol. This is even more a liability when there is a history of previous convulsions.

(b) History of DT's—a delirium is more likely to occur in a patient with a positive history.

(c) History of serious physical disease, particularly liver disease and diabetes. In older patients congestive failure makes alcoholic withdrawal even more hazardous.

Also important is the fact that the administration of sedatives or ataractics in acutely intoxicated and/or debilitated patients may sometimes be dangerous. In view of this, medication should be given with care.

As well as these physical aspects of care which have been outlined, the patients were seen daily during the first two or three days and almost as frequently afterward for the psychotherapeutic aspects of care, which we must remember go hand in hand in the optimal readjustment of the alcoholic.

In association, an early history was obtained from relatives by the Social Service and this accentuated both physical and psychiatric history as well as alcoholic history. Furthermore, there has been established an Alcoholics Anonymous chapter in the hospital and the inebriate is able to attend as soon as he is physically able.

The results obtained during this period were most gratifying. None of the patients who were not in DT's when they came in ever developed them. Those who did come in with signs of DT's cleared up within eight hours of admission. There were no convulsions or other mishaps.

Two patients were admitted in hepatic coma and were sent to the hospital building where they were treated with fluids intravenously and large doses of vitamins. Both recovered from this episode. Three patients came in with alcoholic hallucinosis as the only symptom and Compazine given 30 mgm. spansule q 12 h cleared up the hallucinations within two weeks of admission.

In summary we found that the regimen upon which we had pre-agreed proved quite satisfactory. These patients were not treated or kept separately but were mixed with other admissions to the hospital. At present work is being started on the establishment of a separate alcoholic unit which we feel will further aid better treatment and rehabilitation of those with an alcoholic problem.

Eastern State Hospital
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MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	January 1960	January 1950
Brucellosis	2	2
Diphtheria	5	2
Hepatitis (Infectious)	85	26
Measles	639	1341
Meningococcal Infections	7	7
Aseptic Meningitis	3	
Poliomyelitis	0	2
Rabies (In Animals)	26	16
Rocky Mt. Spotted Fever	0	0
Streptococcal Infections	863	1014
Tularemia	19	4
Typhoid Fever	1	1

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

A Step Backward.

At the time this is written, the Virginia State Corporation Commission is stepping into the administration of Blue Cross affairs to the extent of ordering the Richmond Plan to apply a $50 Deductible provision to all of its contracts—with no exception whatever. The result will indeed be a step backward for Blue Cross whose *raison d'etre,* the goal of all of its efforts and development over the past quarter-century, has been elimination—to the greatest extent feasible—of the financial barrier which in all too many cases stands between medical needs and proper care of those needs.

The Plan may be successful in its appeal from this order, but the fact remains that a majority of the Commissioners quite sincerely believed such a drastic step to be necessary to curtail injudicious use of expensive in-patient facilities and the resultant progressive increase of prepayment rates. The opinions of the Commissioners reflect—were influenced by—the opinions of many discerning, thoughtful citizens of this State, of persons sufficiently discerning to recognize the fact that, all influences and pressures notwithstanding, it is a doctor who arranges for each and every hospital admission.

Thus it appears that in this State the voluntary free-enterprise system of the provision of health care has stumbled, and a governmental agency has considered it necessary to grab hold, supposedly to keep it from falling flat on its face. What does this portend for the future? Unless through self-imposed controls and individually imposed self-control doctors can eliminate the wastage of injudicious use of expensive facilities, and unless a greater number of doctors become aware of the difference between liberty and license and more conscientiously and disinterestedly work to safeguard the former, other governmental agencies at other levels of government will grab hold and in their misguided enthusiasm to be helpful may grab so tightly as to choke the life out of the free-enterprise aspects of medical practice.

The Prepaid Medical Care page (p. 42) of the January, 1957, issue of the Virginia Medical Monthly presents an editorial entitled "Why Not a Deductible". The reasons why not which were outlined two years ago still hold true, and they are cogent reasons. It is a reflection upon the medical profession that a Blue Cross Plan must rely on financial anxieties to keep people out of hospitals. To make matters worse, such anxieties do not exist with the well-to-do, so they have access to health-care facilities first of all while poor folks, whose medical needs might be greater, find the deductible a barrier between them and timely care.

There is wastage in the way we are now building and using hospital facilities. But to reduce that wastage we should not run the other chance of the waste of the most valuable thing in the world, the recuperative power of the patient. There should be no barrier or impediment to use of any health care resources—no period of delay during which the patient's recuperative powers become progressively exhausted. The wisest use of health care resources is to bring them to bear at the earliest possible moment. There should be no financial barrier between people and hospital admission when such is medically needed; on the other hand, people should not be in hospitals needlessly.

A first-dollar coverage of hospitalization expense, be it through a Blue Cross contract or an insurance policy, is a most important and effective tool or instrument for doctors to use in the care of their patients. Used judiciously it will last them indefinitely, permitting an excellence of care, recognition of which by the public will preclude the public's thinking too seriously about any "system" other than free-enterprise private practice. Some doctors seem reluctant to exercise the meticulous care with which such an instrument must be used; however, blunting the instrument with a deductible to make it easier for the doctor to handle will simultaneously make it less effective as concerns patient care.

Admittedly the doctor today has a tremendous medical-economic responsibility, one that entails withstanding all sorts of pressures upon his integrity. But if he does not live up to those responsibilities and fulfill the obligations which, albeit unwanted and unasked-for, today's medical-economics has foisted upon him, he will be relieved of them—by government. Granted it is easier said than done, but the doctor must permit his patient's demands about hospitalization to influence him no more than though the demands pertained to use of other medical instruments, to specific therapy, or to operative technique.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Amebiasis

In amebiasis there is invasion of human tissues by the protozoan parasite, Entamoeba histolytica. Many think of this infection as being confined to the tropics or semi-tropics but it is known to occur widely in the north and south temperate zones.

The causative agent is the Entamoeba histolytica and two separate stages of the parasite are recognized, the trophozoite, or vegetative stage, and the cystic stage. The former is the stage which invades the tissues, feeds, multiplies rapidly by binary fission, and maintains and spreads the infection through direct extension of established lesions and through initiation of new lesions. The trophozoites do not survive outside the body. The cysts, on the other hand, have resistant walls and are well adapted for survival outside the body. There are two nuclear divisions of the newly formed cyst in the intestinal canal and they are found usually quadrinucleate in the normal stool. They are quickly killed by drying and by the ultraviolet rays of the sun. They need moisture for survival but the temperature of the water affects their survival time. They may survive up to a year at freezing but remain alive only a few minutes at room temperature and death becomes progressively more rapid with rising temperatures.

The presence E. Histolytica is low in high socio-economic groups, for example college students. The highest infection rates are found in unsanitary institutionalized groups such as orphanages and mental hospitals. Among low socio-economic groups in rural populations, small villages, and even in small cities where toilet facilities, though possibly available, are little used by children and are indifferently used by adults, the infection is more frequent. Where fecal deposition is at the site of immediate convenience, in the yard and near the doorstep, there is high concentration of unconfined feces and consequently great transmission and high prevalence rates are found. There is ample opportunity for direct contamination of hands, foods, and drink. Spread may take place through use of raw vegetables for which human feces has been used as fertilizer, particularly leafy vegetables such as lettuce, through infected food handlers, through flies, and through water.

In this country human feces is not used as fertilizer. It is believed that the accepted sanitary disposal of feces and the usual handwashing procedures prevent transmission through infected food handlers. Flies and other insects are probable means for contamination of food and drink but in the epidemiology of amebiasis we must remember the importance of temperature on the survival of the agent. It is also likely that the volume and frequency of the dose have bearing on transmission of the infection.

In the epidemic in Chicago more than twenty-five years ago, gross fecal contamination of the water was shown to be present in two hotels—back siphonage from toilets, drainage from a defective sewer over the unclosed water cooler, and direct cross connections between sewer lines and water supply. Even in the face of these defects the attack rate was comparatively low when there was short exposure and it increased with the duration of stay of the guests in these hotels.

Experiments have shown that the feeding of a great many cysts to man or experimental animals may fail to establish infection. Massive exposure seems necessary. In the tropics and subtropics where climatic conditions and lack of sanitary toilets encourage promiscuous defecation, in the filthy conditions found in some mental institutions, and in such specialized circumstances as provided in the Chicago epidemic, endemic infections are supported and even epidemic situations may develop with high morbidity and mortality rates.

It does not seem that a highly protective immunity develops in either man or domesticated animals as a result of the infection. On the contrary, the disease shows chronicity and relapse. There are subclinical cases that persist for years. Apparently resistance to the infection is lowered by malnutrition. There is evidence that the protozoa of E. histolytica supporting, or supported by bacterial invaders may produce a more fulminating type of dysentery than either alone.

The symptoms of mild amebic colitis are almost

identical with those of mucous colitis. Amebic dysentery may be confused with bacillary dysentery and other infections of both small and large bowels. There may be symptoms of subacute appendicitis during a clinical or subclinical amebic infection. Amebic hepatitis or liver abscess may be confused with other conditions. Accurate diagnosis of amebic infection depends primarily on the demonstration of E. histolytica in the stools or in material aspirated from liver or other abscesses. The trophozoite is rarely seen in ordinary formed stools but may be recovered from freshly passed liquid or semiliquid stools induced by saline cathartics, or in flecks of blood and mucus on the surface of formed stools, or in mucus aspirated from the lumen of the rectum, or from ulcers at the time of proctoscopy. Cysts may be found in formed stools. It should be emphasized that as many as ten or more different stools over a period of two or more weeks may be required to demonstrate the parasite. Also, even an experienced technician may have difficulty in identifying them. The inexperienced technician who does not have the opportunity for interchange with experienced personnel may fail to discover or may not recognize the infecting agent. This might also result in a patient being treated for amebiasis when harmless amebae or even epithelial cells have been mistaken for E. histolytica.

In Virginia amebiasis presents a rather widespread distribution with reports of one or more cases from 60 of the 98 counties during the past 10 years. Cases have been also reported from 11 of the 12 cities of the first class. It is interesting to note that two of the counties with the highest number of cases are Dinwiddie and Amherst and that the cases from these counties are almost entirely from the mental institutions located in them, Central State Hospital in Dinwiddie and the Lynchburg Training School and Hospital in Amherst. Fairfax County has reported the second largest number of cases. This county has become more and more urbanized and has no orphanage or mental institution that accounts for the cases. Credit must, therefore, be given them for better case-finding. Of the eleven cities with reported cases in the past 10 years, Norfolk leads with 15 cases and is the only city which reported more than 10 cases during this period.

In 1959 there were forty-nine cases reported in Virginia and seventeen of these were from the Central State Hospital. Seven of the patients from this institution died of amebiasis and one death (the only reported case) occurred in the Western State Hospital. There was a non-fatal case in the Lynchburg Training School and Hospital. Thus eighteen cases, or thirty-five and five-tenths percent of the cases reported in Virginia in 1959 occurred in mental institutions.

Table I shows the number of cases of amebiasis reported in Virginia during the years 1933-1959, inclusive.

Table I

Number of Cases of Amebiasis Reported Annually in Virginia 1933-1959, Inclusive

Year	No. Cases	Year	No. Cases	Year	No. Cases
1933	16	1942	10	1951	4
1934	12	1943	6	1952	8
1935	10	1944	3	1953	20
1936	9	1945	13	1954	20
1937	7	1946	8	1955	18
1938	5	1947	17	1956	33
1939	10	1948	12	1957	33
1940	11	1949	17	1958	54
1941	4	1950	10	1959	48

The treatment of amebiasis is usually with emetine for prompt relief of colonic infection. This is not curative and it must be followed by one of the arsenicals, such as carbasone, or one of the iodinated oxyquinolines, such as chiniofon, diodoquin, or vioform. Chloroquin, one of the newer antimalarials, has been shown to be effective in amebic hepatitis. Aureomycin and terramycin have proved to be effective in amebic colitis.

In attempting to reduce the transmission of amebiasis in a local population in which there are endemic cases, consideration must be given to the economic, sociologic, and educational background of the area. Customs and habits are a part of this background. Control will have to be centered on groups and these may be permanent, semipermanent, or transient. Within the area, any population which is a part of the armed forces must be included. The one may affect the other and common sources of supply, food, water, and sanitation must be investigated.

In the case of water, ordinary chlorination is not enough and heat must be used to destroy the cysts; bringing the water to boiling point will be more than sufficient.

There is no therapeutic chemical agent with a demonstrated prophylactic value.

Current Currents

COUNCIL ACTION: The Council of The Medical Society of Virginia has recommended to each component society "that it create within its jurisdiction effective plans to offer needed professional services to all citizens without regard to the ability to pay, utilizing, and with due regard to, all medical facilities, both public and private".

CONFERENCE ON AGING: The American Medical Association is sponsoring, during the first quarter of 1960, four regional conferences on aging. One of these will be held at the Southern Hotel, Baltimore, on March 30-31. The Medical Society of Virginia is one of the co-sponsoring State Societies. The Conference will be attended by representatives of agriculture, industry, labor, education, churches, business, government, and civic organizations.

HEALTH BUDGET: It is always interesting to review the President's requests to the Congress on matters pertaining to health. He has recommended, for fiscal 1961, an expenditure of $904 million—$53 million more than for the current fiscal year. Budget highlights are (1) A plan to use $4.7 million to support research and information projects in foreign countries which hold promise of significant contributions in the fields of health, education and welfare; (2) Elimination of the 15% limitation on overhead expenses for the National Institutes of Health research grants; (3) A request of $400 million for NIH, the amount appropriated by Congress last year when the Administration requested $296 million; (4) An increase of $22 million for veterans hospital and medical care; (5) An increase of $2.7 million for the Food and Drug Administration; (6) A large increase was requested for the U.S. Public Health Service's Environmental Health Program for combating air and water pollution, and radiation hazards; (7) A decrease of $60 million for the Hill-Burton program of hospital construction.

SPANISH-AMERICAN VETERANS: Bills currently before the Congress would grant automatic service-connection privileges, on an in-patient hospital basis, for any disabilities of Spanish-American veterans. Such benefit, on an out-patient basis, has been granted since 1950. Both the AMA and VA are opposed to such legislation, believing that passage would create a dangerous precedent—leaving the door open for other veterans' groups to seek similar benefits in future years.

ANNUAL MEETING: Remember—it will be Virginia Beach in 1960. The dates are October 9-12.

THE KENNEDY BILL: Senator John Kennedy (D., Mass.) has introduced his version of the Forand Bill. Known as S. 2915, the bill is pretty much the same as H. R. 4700, with the exception that it omits surgical benefits. By omitting these benefits, Kennedy hopes to reduce the opposition of the medical profession. At the same time, he believes that the bill will have much appeal for the aged.

PHYSICIAN-DENTIST TAX RULING: According to the Washington Report on the Medical Sciences, the Internal Revenue Service has recently handed down a complicated ruling on a complicated subject. IRS has held that a physician who is also a licensed dentist is performing in the former capacity when doing oral surgery. This means that such income is not subject to the self-employment income tax.

OFFICE OF AGING: The McNamara Committee has called for the creation of a United States Office for the Aging. The Committee reasons that our senior citizens should no longer be buffeted about from agency to agency and committee to committee. It states that there are 16 million Americans over 65 and another 49 million past 45. According to the Committee, those in their middle years and beyond should have their counterpart of the Children's Bureau.

MORE ON FORAND: Secretary Fleming has once again voiced his opposition to the Forand Bill. His latest statement came one day after the President had acknowledged the fact that the Administration is studying the feasibility of increasing the payroll tax one-fourth of one per cent to provide health benefits to the aged. This increase, incidentally, is the same provided in H.R. 4700. While confirming the fact that the payroll-Social Security approach is being studied, Secretary Fleming indicated that the Administration is also considering two other possible answers. They are (1) federal grants to the states, and (2) financial aid to non-governmental health insurance programs.

As this issue goes to press, it is not known just when the Administration's answer to the Forand Bill will be ready for introduction. Mr. Fleming has indicated that its benefits will quite likely be limited to reduction of expenses of catastrophic illness.

DID YOU KNOW DEPARTMENT: A. Conan Doyle, creator of Sherlock Holmes, graduated from University of Edinburgh in 1881 as a doctor of medicine.

A hospital devoted exclusively to dentistry recently opened in Los Angeles. Believed to be the first of its kind in this country, it has 16 operating rooms, 30 recovery rooms, and 50 patient rooms.

Mental Health . . . .

CYRIL R. MILL, Ph.D.

Patients' Attitudes Toward Hospital Care

What is it like to be a patient in a mental hospital? What do patients think of various methods of therapy, and whom among the staff do they see as most helpful? Is there anything in the hospital environment that patients feel is a hindrance to their progress toward better emotional adjustment?

The patients' point of view was the subject of an investigation recently carried out by the psychologists of the state mental hospitals. After a trial series of interviews on 20 patients, a structured interview schedule was prepared which consisted of four questions:

1. Who has helped you the most since coming to the hospital? How?
2. Besides that, *what* has helped you the most?
3. What, if anything, has made it harder for you to get better?
4. Has anyone talked to you who really seemed to understand you and your feelings? If so, who?

These questions were asked of 215 patients, 107 male and 108 female. Their average age was 40 years, the range running from 16 to 65 years.

An attempt was made to obtain replies in each hospital from 30 to 50 patients who had been in the hospital at least six months and not longer than one year. Selecting patients from this group tended to assure that the patients would have recovered from the first, acute, stage of their illness, but would not have been in the hospital so long that they had become "institutionalized". Only those patients were used who could readily respond to the interview.

An additional selective device was used to make sure the patients would be able to respond adequately. They were asked to identify by description, if not by name, a physician, a nurse, a psychologist, social worker, and attendant. If they could describe or name each of these, they were presumed to be sufficiently aware of their environment to cooperate in the interview.

The psychologists who did the interviewing were carefully trained so that the questions were asked to all patients in the same manner. They were told to use the wording of the questions provided in the interview form. They could also probe for a complete response by asking non-leading questions, such as "Can you tell me more about it" or "What else can you add?" Under no circumstances were they to suggest any answers. Only by careful training and agreement upon procedure such as this could there be some assurance, in a group project, that the data from the separate hospitals would be comparable.

The results of this investigation are reported below. One must keep in mind that these tabulations are of *patients' opinions,* not *facts.* The study was an attempt to get at the experience of hospitalization from the viewpoint of the patient. Occasionally these opinions may be quite different from the objective reality as seen by an impartial observer.

TABLE I

WHO HAS HELPED YOU THE MOST?

	Number	Per Cent
Doctors	86	43
Attendants	47	23
Nurses	12	6
Self	8	4
No One	9	5
Psychologist	5	3
Other Patients	5	3
Other	29	14
	201	

As we might predict, the physician is seen as helpful by the most patients, 43%. After that, prediction would probably fall down: we find attendants named five times as frequently as nurses. Many patients feel they help themselves most, and psychologists and other patients are occasionally mentioned. Four per cent say no one has helped them. In the "other" category, were mentioned mother, everybody, the dentist, chaplain, social worker, and Jesus Christ. The total number of patients answering each question varied, so the percentages usually are based on fewer than the total number of 215.

MILL, CYRIL R., Ph.D., *Psychological Service Director, Department of Mental Hygiene and Hospitals, Richmond, Virginia.*

Approved for publication by Commissioner, Department of Mental Hygiene and Hospitals.

The second part of this question attempted to clarify how this help was given. The replies covered a wide range of treatment and services, and emphasized once again that an objectively unimportant, incidental occurrence may achieve therapeutic importance in the patients' eyes.

TABLE II

HOW HAS HE (OR SHE) HELPED YOU?

	Number	Per Cent
Talking	58	32
Medicine	57	31
Kindness	20	11
Shock	11	6
Social Services	8	4
Nothing	4	2
No Response	24	13
	182	

The help given by "talking" which was mentioned by so many patients (32%) referred to casual conversations on the ward, understanding, counseling, encouragement, and being friendly. A few mentioned psychotherapy and group therapy.

Medicine included physical examinations, treatment of physical disabilities, and tranquilizers. Next in frequency were kindness, showing concern, interest and being helpful. A few (6%) mentioned shock treatment. Under social service the patients referred to getting them a job or furlough, writing letters, and arranging home visits.

Similar responses were obtained to question two, "What has helped you the most?" In this question, we were getting an expression of the patients' reaction to hospital procedures, aside from the personal element of being with a liked and respected individual. Again, medication is seen as most important.

TABLE III

WHAT HAS HELPED YOU THE MOST?

	Number	Per Cent
Medication	47	23
Nothing	40	20
Open Ward and Recreation	16	8
Rest	14	7
Hospitalization	12	6
Kindness and Family Influences	12	6
Nursing Care	11	6
Work and School	8	4
Miscellaneous	23	11
No Response	18	9
	201	

However, an almost equal number, 1/5 of the patients questioned, said that nothing had helped them to get better. As you see, all other categories were small. The open ward policy, recreation, occupational therapy, TV, and social activities are much appreciated.

Twelve patients, or 6%, referred to hospitalization factors, such as being with others who have similar problems, having a daily routine to follow, being away from home, and having a chance to think things over. A similar percentage mentioned kindness and family influences such as visits and letters. Under the category "nursing care" were included replies dealing with bathing, receiving help in dressing, and the care and supervision given by attendants and nurses. Six per cent of the patients said that this personal attention is what helped them the most. The miscellaneous category includes scattered references to shock, diet, self-discipline, and visits home.

Now we come to the negative reactions toward hospitalization. Twenty-eight per cent of the patients said that nothing had made it hard to get better. "Symptom description" and "denial of illness" should perhaps be added together to make a category of 18%. These replies included those where a patient said something like "I could get better if I didn't hear these voices." Or, "How can I get better? I wasn't sick in the first place. I shouldn't be here."

TABLE IV

WHAT HAS MADE IT HARD TO GET BETTER?

	Number	Per Cent
Nothing	58	28
Symptom Description	23	11
Hospital Routine	21	10
Denial of Illness	15	7
Loss of Freedom	15	7
Worry About Home	14	7
Negative Reaction to Other Patients	11	5
Relations to Physicians	8	4
Medicine and Shock	8	4
Miscellaneous	11	5
No Response	25	12
	209	

Ten per cent referred to hospital routine as a barrier to progress. Hospital administrators have noted that these are often complaints about which something can be done. This category includes complaints of the diet and food, the noise which interferes with sleeping, monotony, lack of exercise and work, and unexplained changes in routine, such as is caused by the construction programs necessitating moves or rescheduling. Loss of freedom is closely related; some patients do not react favorably to being locked up, secluded from others, or denied outside privileges.

Worry about home is self-explanatory. The category "Relations to physicians" needs definition. These patients said the physicians can't see them enough. They say the physicians lie, blame, or make unrealistic recommendations, like "don't worry." On the whole, these reactions can be regarded as reflections of a desire by the patients to see more of their doctors. It shows how important is the physician's presence to the well-being of the patient.

Under miscellaneous, three patients complained that the nurses or attendants "yell at me, humiliate me, or pick on me." There were no complaints about brutality or physical beatings. This speaks well of the hospital system as a whole. Several patients shouldered the blame for lack of progress upon themselves, saying "I just can't adjust", or they referred to their own stupidity or ignorance.

The last question was an attempt to learn about the potential among hospital personnel for showing close understanding and building a therapeutic interpersonal relationship with the individual patients. This is not an easy task in a large institution, where patients are apt to get lost or lose their individuality in the crowd. We therefore asked, "Has anyone talked to you who really seemed to understand you and your feelings?"

TABLE V

HAS ANYONE UNDERSTOOD YOU AND YOUR FEELINGS?

Yes	129	62
No	77	37
	Number	Per Cent
Doctor	65	50
Psychologist	19	15
Attendant	15	12
Other Patient	11	9
Family	5	4
Nurse	4	3
Other	10	8
	129	

Again we find the physicians fulfilling this therapeutic role for the patients. Half of those interviewed said the physicians seemed to understand them. The psychologists were mentioned next, by 15% of the patients, with attendants following closely with 12%. Other patients are important as trusted confidantes. We must recognize that the answers to this question, as well as some of the others, are determined in part by the frequency of contact between patients and various staff members, and the stereotypes which the patients bring with them to the hospital. In the "Other" category were mentioned Social Workers, physiotherapists, and general responses, like "everyone".

DISCUSSION

This investigation is similar in some respects to research done in Veteran's Administration Hospitals, where 2500 patients have been interviewed. The Roanoke VA Hospital participated in this research. The responses there to the question "Who has helped you the most?" differed a little from those obtained in the present study. The first four named, in order of frequency, in the VA study were doctor, everyone, nurse, and no one. In our study, the most frequent were doctor, attendants, nurses, and self.

The replies corresponded closely, to the question "What has helped you the most?" In the VA study, in order of frequency, the patients named medicine, nothing, rest, and hospital routine. The first five categories in our study were medicine, nothing, open ward and recreation, rest, and hospitalization.

The question about what made it harder to get better cannot very well be compared because of the different categories used. Frequently mentioned in the VA study were medicine and confinement, while in our study were mentioned hospital routine, loss of freedom, and worry about home, with medicine receiving less frequent mention.

The results of this study affirm several things which were suspected beforehand, and point up some unexpected features about the role of various hospital workers. It is not surprising to find that doctors, whether or not they are psychiatrists, loom with large importance in the life of the patient. They are seen as persons of knowledge, influence, and understanding. What may be more surprising is the strength and importance to the patients of the attendants. In view of this finding, what can be done to strengthen the attendant staff to make an even greater contribution to the patient's well-being? The replies to the questions regarding what has helped and what has hindered the patients' recovery give many clues for better hospital management. The open ward policy, where it can be put to use, is an important factor in the lives of the patients.

Besides tending to the physical and routine needs of the patients, the importance of talking with the patient is re-emphasized. Medicine and other therapeutic approaches cannot be minimized, but here is an approach that is open to all hospital personnel who care to take the time. It is probable that the patients are really referring to "listening" as well

as "talking," but in either case this approach can be taken with many patients who might otherwise feel that nothing is being done for them.

SUMMARY

By interviewing patients in a controlled investigation an attempt was made to learn their reactions to hospitalization in institutions for the emotionally disturbed. From the patients' point of view, it was learned that:

1. Physicians were seen as most helpful, with attendants being the second most frequently mentioned.
2. Help is seen most frequently in talking with patients and treating them with kindness. Medicine is seen as helpful, but shock treatment was rarely mentioned.
3. About one-fourth of the patients were unable to point to anything that made it hard to get better. Hospital routine was the chief complaint.
4. About two-thirds of the patients felt that someone in the hospital understood them and their feelings. Physicians were most frequently cited as the understanding person, with psychologists and attendants mentioned next most frequently.

The writer wishes to acknowledge appreciation to the psychologists in the state hospitals who assisted in the planning of this project and in the collection and tabulation of the data.

Cholesterol

More cholesterol is retained in the blood of infants fed human milk and cow's milk than those given formulas containing corn, coconut and soya oils, according to two Iowa researchers.

Drs. Samuel J. Fomon and Donita J. Bartels of the department of pediatrics, College of Medicine, State University of Iowa, Iowa City, reported on a study of cholesterol concentrations in infants in relation to diet in the January A.M.A. Journal of Diseases in Children. The authors said reports that atherosclerotic changes occur in the coronary arteries in the early months of life and that cholesterol may play a role in these changes prompted their research.

The study involved 55 normal infants, ranging from 1 week to 6 months of age. Twenty-one were fed human milk, 8 cow's milk or evaporated milk and water, 21 formulas in which the fat was predominantly a mixture of corn oil and coconut oil, and 5 soya oil.

The mean concentration of cholesterol of infants receiving human milk was greatest (171.7 mg/100 ml.) and that of infants receiving cow's milk or evaporated milk and water was next (156.0 mg./100 ml.). "Although the total content of fat in these two diets is nearly equal, the fecal excretion of fat is considerably greater by infants fed whole cow's milk, and thus, with similar volumes of intake, the absorption of fat would be greater by infants fed human milk."

"Infants ingesting a formula in which the predominant source of fat was soya oil had the lowest mean concentration of cholesterol in the serum [blood] (108.0 mg/100 ml.), and infants receiving one of three formulas in which corn oil was the predominant source of fat had intermediate concentrations (143.5, 121.0 and 119.4 mg/100 ml.)."

"With the exception of the relative values for Groups I and II [those fed human and cow's milk], the concentrations of cholesterol with the various feedings were as might be anticipated on the basis of current thoughts about dietary factors that influence the concentration of cholesterol in the serum.

"The feedings containing the greatest percentages of saturated fatty acids, smallest percentages of linoleic acid, smallest percentages of essential fatty acids, and lowest iodine numbers (Groups I and II) resulted in the greatest concentrations of cholesterol."

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Jewish Medical Ethics. A Comparative and Historical Study of the Jewish Religious Attitude to Medicine and Its Practice. By Rabbi Dr. Immanuel Jakobovits. Philosophical Library, New York. 1959. xlii-381 pages. Price $6.00.

Textbook of Physiology. By K. M. BYKOV, G. Y. VLADIMIROV, V. Y. DELOV, G. P. KONRADI, A. D. SLONIM. Edited by Academician K. M. Bykov. Foreign Languages Publishing House, Moscow. 1958. 763 pages. Illustrated.

This Textbook of Physiology accurately reflects the materialistic and sensualistic interpretation of life phenomena. This is achieved by relating the principle of the conditioned reflex to all animal functions, thus it is the work and thought of I. P. Pavlov that dominates the presentation.

The editor, in the preface, states that "The authors offer this book to foreign students and physicians in the hope that thereby they will make their modest contribution to the international scientific ties which serve the cause of peace and progress." (p. 14)

Throughout the text, the discoveries and contributions of Russian workers take precedence; however it is amply evident that the authors possess considerable knowledge of the applied and conceptual developments in physiology by western workers. The first chapter defines the subject and traces physiology historically. The principle followed is "to make the vital activity of the organism known", and to subordinate the particular in favor of the whole (synthetic physiology as opposed to analytic physiology), i.e., the whole organism in its interaction with its environment. This "can lead to deeper study of the functions of the organism and to learning to control them". In the "pre Pavlovian" period, physiology is considered as having been founded by William Harvey with the discovery of the circulation of the blood and the introduction of animal vivisection into scientific practice. Subsequently, facts were accumulated but the next "great discoveries of natural science" were "the law of the conservation of energy (Helmholtz), "the cellular theory (Virchow), and "the theory of evolution" (Darwin). However the high point in Russian physiology was the work of I. Sechenov (1829-1905) who discovered the phenomenon of inhibition in the central nervous system (1862) and who wrote, *"Reflexes of the Brain."*

In this work, consciousness was subjected to a natural-scientific analysis, and the influence of his concept that ". . . the most complex phenomena of mental activity were basically *reflex* acts," (p. 519) and his "bold and impassioned plea to extend natural-scientific analysis to all phenomena of life" (p. 520) deeply influenced his successors including A. Samoilov (1867-1930), N. Y. Wedensky (1852-1922) and chiefly I. Pavlov (1849-1936) who "actually translated into reality the principles of dialectical materialism that nature should be regarded as an interconnected and integral whole," (p. 28) thus denying spontaneous materialism, vitalism, metaphysics, agnosticism, and idealism. Pavlov's "theory of reflex activity is based on three fundamental principles of exact scientific investigations: first, the principle of determinism, . . . second, the principle of analysis and synthesis, . . . and finally, the principle of structure. . . ." (p. 522). *"The principle of determinism* . . . lies in the consistent application of the law of material causality to all phenomena *without any exception* and in all organisms." (p. 522). The terms of "thought", "idea", and "mental function" so frequent in our western minds, are replaced by "nervous structure", "interconnection of different groups of nerve cells" and "reflex activity".

It will no doubt, and with good reason, surprise and bewilder the American medical reader to find so much ideological and medico-philosophical emphasis in a textbook of physiology. This is unfortunate, and we must regard the Russian emphasis on the conceptual foundation of scientific thought as most commendable despite our fundamentally opposite viewpoint. How encouraging it will be when new editions of our best physiology texts concern themselves with an equally forceful presentation of the western viewpoint. The search for the reasons for this lacuna in our medical education should receive new and strong emphasis from this exposure to the existing firmness of the established Russian view of man in his physiological aspects. Does this absence of the presentation of our fundamental west-

ern intellectual foundation not imply a tacit acceptance of the Russian standard by default? Can we admit a duplicity of views, one reserved for the laboratory in which we are "up with the Russians" and another reserved for Sundays, Easter and Christmas, where we are ahead of them?

The factual data related to bodily function is generally in close agreement with American texts, although the section on digestion, metabolism and nutrition is about half as long as the treatment in American texts. The technical ability and scientific accuracy of Russian physiologists is not less than their western counterparts. The organization of the text is very similar to the order of American texts, and the section on physiology of the senses appears to be a translation (with significant ideological additions) of a Russian booklet by Andreev.

The use of this text in undergraduate medical studies in this country is highly unlikely but physiologists, teachers of medical history and philosophy and those interested in critical analysis of medical education should be familiar with this work.

GEORGE E. ARRINGTON, JR., M.D.

Master Your Tensions and Enjoy Living Again. By GEORGE STEVENSON, M.D., and HARRY MILT. Prentice-Hall, Inc., Englewood Cliffs, N. J. 1959. xii-241 pages. Price $4.95.

Dr. Stevenson and Mr. Milt have written a readable book to help the reader formulate a plan to handle the excess tension that is so prevalent in our modern society. It begins by tracing the causes of tension to the feeling of being threatened or anxious because of factors in the life history. Then, it provides methods of getting rid of tension based on the causes. The third section is concerned with methods of avoiding tension building situations in major life areas. Anecdotes and brief case histories make it possible for some individuals to recognize their own problems or situations, and serve to keep up the human interest element.

Those whose life adjustment is hampered by recognized neurotic trends might be helped to trace the possible derivation of their difficulties by the insightful beginning section. Probably the most useful section for the do-it-yourself psychiatrist are the eight "Tension Breakers" or methods of getting rid of tensions. These include the time proven methods of talking out problems, taking a vacation, getting rid of anger safely, curbing excess competition, making friends, sharing and doing things for others, and ironing out conflict situations, neatly listed and adequately described.

The weakest section of the book is the last, where conflict in major life areas is handled too superficially in too few pages.

This book is probably sounder than many books written to help people live more satisfying lives. Its claims are modest and its suggestions are practical and usable by those whose difficulties are within normal limits.

VIRGINIA L. HUGHES.

Editorial....

Dr. Wyndham Bolling Blanton

1890-1960



Editor 1932-1942

THE DEATH of Dr. Wyndham B. Blanton, on January 6, brought to a close one of the most distinguished medical careers of our generation. As an internist and allergist he contributed greatly to the stature of Richmond as a medical center. As a devoted churchman he gave unstintingly of his time to religious matters. As an antiquarian and historian, both lay and medical, he was of national renown and the recognized authority on ancient medicine in Virginia and the surrounding areas. Despite his intense interest in all aspects of the cultural side of medicine and the constant demands of his numerous civic and religious obligations, he never permitted these to lessen the zeal with which he pursued the practice of medicine.

Dr. Blanton was born in Richmond on June 3, 1890, the son of Dr. Charles Armistead and Elizabeth Wallace Blanton. He graduated from Hampden-Sydney College in 1910 and in 1933, at the relatively early age of 43, he was the recipient of the honorary degree of Doctor of Letters from the same institution. After two years of study, at the University of Virginia, he received an MA degree. He then attended the College of Physicians and Surgeons in New York where he graduated in medicine in 1916. This was followed by postgraduate work in New York, Berlin and Edinburgh. He served as a captain in the Army Medical Corps during World War I. Following his discharge he returned to Richmond, and began the practice of internal medicine in 1920.

By background, training and natural aptitude Dr. Blanton was admirably fitted for what was destined to become an outstanding medical and teaching career. He was named Associate Professor of Medicine at the Medical College of Virginia in 1930 and Professor of the History of Medicine in 1933. He became Professor of Clinical Medicine in 1939 and Professor Emeritus of Clinical Medicine and the History of Medicine in 1950. In 1936 the Immunology Clinic at the Medical College of Virginia was organized by Dr. Blanton and he continued as Director until 1954. Under his guidance this became one of the largest allergy clinics connected with a medical school.

During this busy career, he found time to write, under the sponsorship of The Medical Society of Virginia, a three volume history of *Medicine in Virginia* during the 17th, 18th and 19th centuries. He also prepared a history of the Second Presbyterian Church, of which he was for many years an elder, as a part of its Centennial observation in 1945, entitled "The Making of a Downtown Church". He wrote many articles for professional journals and served as Contributing Editor of the *Journal of the History of Medicine* and Associate Editor of the *Annals of Medical History*. In 1932 he was appointed Editor of the Virginia Medical Monthly and served in this capacity until 1942 when he became Editor Emeritus. He continued as a member of the Editorial Board and participated actively in the affairs of this journal until his death. The magnitude of his contribution to the Virginia Medical Monthly may be appreciated by recalling the 120 deadlines he met during the decade he was Editor.

Dr. Blanton's lay affiliations were many. He was Chairman of the Board of Trustees of the Union Theological Seminary in Richmond. He was the first and only President of the Historic Richmond Foundation. This organization was chartered in 1956 for the purpose of preserving Richmond houses and sites of historic value. Its major undertaking was the reclaiming and restoration of houses on Church Hill in the blighted region surrounding St. John's Church. This task was made more difficult by the absence of natural boundaries which would delimit the area. Despite these handicaps, the work was well advanced under Dr. Blanton's guidance and continuation of the aggressive leadership which characterized his presidency should insure its completion. A more fitting memorial could not be found. Dr. Blanton was also President of the Virginia Historical Society, and his death preceded by only a few weeks the first annual meeting of this organization scheduled to be held in its handsome and newly enlarged headquarters on the Boulevard. In 1957 he organized the Medical Exhibit of the Jamestown Festival and many of the items collected by him are still on display at

Jamestown. At the time of his death he was engaged in assembling data for a display in the Virginia Civil War Commission Medical Exhibit which will be held during 1961-65.

Dr. Blanton was a former Chairman of the Section on the History of Medicine in the Richmond Academy of Medicine and participated in all of its activities. He presented an oil painting of Dr. Reed to the Section when its annual meeting was designated Walter Reed Night.

He belonged to numerous medical societies and had served as president or vice-president of many of these organizations. He was elected the first Chief of Medicine in the recently opened Richmond Memorial Hospital. Dr. Blanton was a member of Phi Beta Kappa, as well as other social and professional fraternities. He was active in patriotic organizations and was a past president of the Society of the Cincinnati in the State of Virginia. He also was a former President of the Society of Colonial Virginia and a member of the Society of Colonial Wars.

Despite the constant inroads on his time these numerous commitments made, Dr. Blanton found time to spend each weekend at "West Hill Farm", a family place in Cumberland County, where he personally operated a large dairy herd of Holstein-Friesian cattle.

Few have accomplished as much as Dr. Blanton in so many different fields of endeavor. As physician, teacher, editor, author, historian, churchman and officer in numerous medical and lay organizations he brought an orderly mind and a skill for organizing which permitted him to compress several careers into a lifetime which fell a little short of the Biblical three score years and ten. His manner was unhurried but he wasted neither time nor motion and all who worked with him found their tempo accelerated to keep pace with his. Truly he was a remarkable man.

Much of Dr. Blanton's success unquestionably stemmed from a most happy home life. Mrs. Blanton, the former Miss Natalie Friend McFaden, is a gifted writer in her own right and was of untold aid to Dr. Blanton in the preparation of his many articles and books. He also is survived by four children, Mrs. Harry W. Easterly, Jr., Charles A. Blanton II, an attorney, and two physician sons, Dr. Frank M. Blanton and Dr. Wyndham B. Blanton, Jr., and eleven grandchildren. Dr. Blanton, Jr., is Assistant Dean of Medicine at the Medical College of Virginia.

HARRY J. WARTHEN, M.D.

Society Activities . . . .

Williamsburg-James City Medical Society.

Dr. Edward S. Ray, Richmond was guest speaker at the meeting of this Society on January 13th. His topic was Pathological Entities of the Bronchial System.

New officers were installed as follows: president, Dr. B. Herman Bailey, Yorktown; vice-president, Dr. Robert E. DeBord; secretary, Dr. Baxter I. Bell, Jr.; and treasurer, Dr. George J. Oliver, Jr.

Petersburg Medical Faculty.

Dr. Kirby T. Hart has been elected president of the Faculty, succeeding Dr. Milton Ende. Dr. Herbert M. Levitt has been named vice-president and Dr. Alvin Cohen, secretary-treasurer.

Southern Medical Association.

Mr. Robert F. Butts, Birmingham, has been named executive secretary-treasurer of the Southern Medical Association. He also retains his duties as business manager. The announcement was made following a recent meeting of the Association's executive committee. Mr. V. O. Foster was appointed as professional relations counselor and Mr. C. P. Loranz remains as advisor and special consultant.

Mr. Butts has been with the Association since 1948 and has held the offices of assistant to secretary-manager, assistant secretary-manager, business manager and associate executive secretary-treasurer.

Tri-State Medical Association.

The annual meeting of this Association will be held at the Columbia Hotel, Columbia, South Carolina, March 21 and 22. The complete program for this meeting is published on advertising page 66 of this issue of the Monthly.

Our readers are cordially invited to attend this meeting.

Pan-Pacific Surgical Association.

The Eighth Congress of this Association will be held in Honolulu, Hawaii, September 27 through October 5, 1960. All members of the profession are eligible to register and are urged to make arrangements as soon as possible if they wish to be assured of adequate facilities because of limited space.

Further information and brochures may be obtained by writing Dr. F. J. Pinkerton, Director General of the Pan-Pacific Surgical Association, Suite 230, Alexander Young Building, Honolulu 13, Hawaii.

News Notes . . . .

New Members.

Since the list published in the February issue of the Monthly, the following members have been admitted into The Medical Society of Virginia:

Lawrence Carter Ball, M.D., Roanoke
Edward Charles Bauer, M.D., Roanoke
Paul Henry Boyer, M.D., Springfield
Robert James Buchanan, M.D., Churchland
Julia Emmett Edmunds, M.D., Clifton Forge
Meade Castleton Edmunds, Jr., M.D., Clifton Forge
Richard Harrison Egdahl, M.D., Richmond
Richard Ludwig Funk, M.D., Petersburg
Lester Langdon Gillespie, M.D., Roanoke
Marcus P. Goumas, M.D., Falls Church
Jan Marinus, M.D., Fries
Rose Marie Morecock, M.D., Bedford
John Howard Renner, M.D., Herndon
Abe L. Schwartz, M.D., Newport News
Frederick William Shillinger, M.D., Hampton
William Henry Sipe, M.D., Roanoke
John Moore Stoneburner, M.D., Danville
Doris Lee Arnold Thurman, M.D., Vinton
William Allen Thurman, Jr., M.D., Vinton
Eugenia Urbanovich, M.D., Petersburg
Stuart Bruce White, M.D., Blackstone
Thomas Mahlon Wright, M.D., Falls Church

State Board of Medical Examiners.

At the meeting of the Board in December, 1959, the greatest percentage of those who failed were among foreign graduates. Of the 169 foreign graduates who took the basic science portion of the examination, 114 failed. Six of the 80 failed the professional portion. Eight of the 18 United States or Canadian graduates failed the basic science portion; none of the 11 who took the professional portion failed.

The Board licensed 85 doctors (74 foreign) by examination, and 60 (all American) by reciprocity. They are as follows:

Licensed by Examination

Dr. Dhia I. N. Allahverdi, Fargo, N. D.
Dr. Jorge Anibal Allende, Apple Creek, Ohio
Dr. Arjan Dass Amar, Rochester, N. Y.
Dr. Santi Amoroso, Baltimore, Md.
Dr. Antonio Rodriguez Antunez, Buffalo, N. Y.
Dr. Bernd Bruno Bach, Knoxville, Tenn.
Dr. Carter Snow Bagley, Richmond
Dr. Nicolas Baltazar, Trenton, N. J.
Dr. Karl Alexander Birk, Petersburg
Dr. Marlene Elizabeth Bolling, Richmond
Dr. Rogalio Menendez Borrell, Staunton
Dr. Johann Wilhelm Buattgen, Cleveland, Ohio
Dr. Ernesto Velazquez Castro, Bluefield, W. Va.
Dr. Mehmet Nuri Cay, Phoenix, Ariz.
Dr. Narciso Carag Chan, Huntington, W. Va.
Dr. Georges Daoud, Brooklyn, N. Y.
Dr. Brigitta Anna Lina Dassler, Beckley, W. Va.
Dr. Wolfgang Otto Werner Dietsche, Columbus, Ohio
Dr. Fernando Urriza Duralde, Chattahoochee, Fla.
Dr. Ilhan Ermutlu, Williamsburg
Dr. Emilio Espinosa, Richmond
Dr. Rafel Antoni Falkiewicz, Washington, D. C.
Dr. Rahim Farid, Oneonta, N. Y.
Dr. Antonio Fermani, Orange, N. J.
Dr. Erwin Hans Friedrich, Chicago, Ill.
Dr. Raul R. Garcia, Roanoke
Dr. Maritza Lavinia Garrido, Santa Monica, Calif.
Dr. Miguel Antonio Garrido, Chicago, Ill.
Dr. Roger Arthur Glover, Jr., Miami, Fla.
Dr. Bahri Gungor, Colony
Dr. Joachim Franz Hacker, Norfolk
Dr. Gunter Ernst Hahn, Norfolk
Dr. Ivan Herzog, Bronx, N. Y.
Dr. John Athanasios Kastretsios, Philadelphia, Pa.
Dr. Julian Dantzler Kelly, Jr., Savannah, Ga.
Dr. Assad Shahady Khoury, Arlington
Dr. Gerhard Kosmahly, Salisbury, Md.
Dr. Panagiotis George Koutrouvelis, Kansas City, Kans.
Dr. Akira Kuramata, Lynbrook, N. Y.
Dr. Rudolf Laveran-Stiebar, Philadelphia, Pa.
Dr. Henry Steele Lewis, Jr., Charlottesville
Dr. Stuart Hayes Lewis, Wayne, Pa.
Dr. Hisashi Majima, Miami, Fla.
Dr. Frances Wha Shik Min, Hyattsville, Md.
Dr. Rogelio G. Marcial, South Miami, Fla.
Dr. Gabriella Elizabeth Molnar, New York, N. Y.
Dr. John Janos Molnar, New York, N. Y.
Dr. Arturo M. Monteiro, Bethesda, Md.
Dr. Satoru Makamoto, Cleveland, Ohio
Dr. Predrag Nastasic, Cleveland, Ohio
Dr. Santiago F. Noble, Atlanta, Ga.
Dr. Bohuslav Dov Novak, Petersburg
Dr. Frank Joseph O'Connor, Jr., Winston-Salem, N. C.
Dr. Denes Mihail Orban, Chicago, Ill.
Dr. Christos A. Papailias, Washington, D. C.
Dr. John Winston Pereira, Takoma Park, Md.
Dr. Rafael Pereyra-Ricart, Colony
Dr. Herbert Pfeiffer, Akron, Ohio
Dr. Raul Gaston Puelma, Harlan, Ky.
Dr. Alexander Radywyl, Colony
Dr. Dean Raft, Atlanta, Ga.
Dr. Carlo Rao, St. Louis, Mo.
Dr. Gottfried Johannes Ressel, Denver, Colo.
Dr. Joseph Ritrovato, Cleveland Heights, Ohio
Dr. Clement Jay Robbins, III, Richmond
Dr. Dankwart E. H. Rodler, Fredericksburg
Dr. Joseph Ki-Muk Kyu, Tewksbury, Mass.
Dr. David L. Sarrett, Richmond
Dr. Domenico Scarano, Cincinnati, Ohio
Dr. Klaus Schulz, Cleveland, Ohio
Dr. Georgine Faludi Siegler, Philadelphia, Pa.
Dr. Ernest Paul Smit, Norfolk
Dr. Jack Sobel, Petersburg
Dr. Karl Ferdinand Stammen, Newton, Mass.
Dr. Manfred Steiner, Washington, D. C.
Dr. Georg Karl Szeiklies, Long Branch, N. J.
Dr. Oguz Temucin, Cleveland, Ohio
Dr. Arnoldo Horacio Urruti, Knoxville, Tenn.
Dr. Charles Van Oppen, Norfolk
Dr. Narain Pribhdas Vaswani, Petersburg
Dr. Milan M. Vuitch, Chevy Chase, Md.
Dr. Ernesto Waingortin, Jersey City, N. J.
Dr. Robert Waterhouse, Wilmington, Del.
Dr. William Thomas Wilkins, Richmond
Dr. Roy James Yates, Roanoke

Licensed by Endorsement of Credentials

Dr. Olav Henry Alvig, McLean
Dr. Llewellyn Lee Ashburn, Bethesda, Md.
Dr. Kenneth Rone Baldwin, Richmond
Dr. Stuart Hall Bartle, Charlottesville
Dr. Herbert Eugene Bean, Cradock
Dr. Ralph Edmund Beck, St. Louis, Mo.
Dr. Harold John Berman, Alexandria
Dr. Alfred Jay Bollet, Charlottesville
Dr. Audrey Kathleen Brown, Charlottesville
Dr. Donald Edwin Chambers, Norfolk
Dr. Lewis Robert Clough, Roanoke
Dr. Margaret Dorothea Craighill, New Haven, Conn.
Dr. Carl Eugene Crimm, Annandale
Dr. Alfred Dibbs, Washington, D. C.
Dr. Albert Maxcy Dickson, Jr., Norfolk
Dr. Richard Thomas Donelan, Methuen, Mass.
Dr. Julius Cherry Early, Jr., Norfolk
Dr. William Jenkins Erwin, Charlottesville
Dr. Nancy Carolyn Flowers, Fishersville

Dr. Stanley William Fox, Pierre, S. D.
Dr. Donald Anthony Fusia, Sr., Westmoreland
Dr. Robert Clyde Grant, Wise
Dr. John Francis Heath, McLean
Dr. Sidney Paul Helfer, Norfolk
Dr. Edward Kenneth Isbey, Jr., Portsmouth
Dr. William Burrell Jones, Durham, N. C.
Dr. Irvin Morris Kalb, Fairfax
Dr. William Henry Keeler, Williamsburg
Dr. Julian Israel Kitay, Charlottesville
Dr. Werner Krebser, McLean
Dr. Calvin Murry Kunin, Charlottesville
Dr. William J. Lawson, Herndon
Dr. Joseph Wayland Linhart, Arlington
Dr. Robert Carpenter Macon, Rockville, Md.
Dr. Gordon Evans Madge, Richmond
Dr. Robert Hutcheson Mauck, Richmond
Dr. Kenneth Lowell McCoy, Washington, D. C.
Dr. Wayman Cornelius McCoy, Jr., Norfolk
Dr. Crawford Eugene McLain, Roanoke
Dr. James Quinter Miller, Charlottesville
Dr. Willard Yasuo Miyahira, Wise
Dr. John Francis Nowell, Metairie, La.
Dr. David Gerald Ostrolenk, Norfolk
Dr. Frederick William Plugge, IV, Washington, D. C.
Dr. Herbert Pollack, New York, N. Y.
Dr. Robert Hammond Reed, Woodbridge
Dr. John Howard Renner, Herndon
Dr. Louis Elmo Richard, Petersburg
Dr. Stanley Melvin Sager, Winchester
Dr. Robert Alan Senescu, Richmond
Dr. Richard Vincent Smalley, Richmond
Dr. John Terence Smith, Norfolk
Dr. John H. Stauffer, Galax
Dr. Allan Hugh Stewart, Forest Heights, Md.
Dr. Virginia Edwards Till, Richmond
Dr. Anthony Vincent Torre, Roanoke
Dr. Nan Poppell Van Wagenen, Washington, D. C.
Dr. Billy Leonard Vaughan, Wise
Dr. Thomas Uriah Vermillion, Hampton
Dr. Doran Harvey Williams, Roanoke

Dr. R. W. Garnett,

Danville, has been appointed medical director of Hilltop Nursing Home. He was public health director of Danville for thirty-three years and until recently was on the staff and special assistant to the superintendent of the Lynchburg Training School and Hospital.

Hospital Staff Members.

Dr. Frank E. Tappan, Berryville, has been elected president of the Medical Staff of the Winchester Memorial Hospital. Dr. John C. Hortenstine is vice-president; Dr. W. Clayton Anderson, secretary; and Dr. Monford D. Custer, Jr., treasurer.

Dr. John A. Cocke has been named president of the Medical Staff of the Leigh Memorial Hospital, Norfolk. Dr. George H. Rector has been named vice-president and Dr. Robert W. Alfriend, secretary-treasurer. Dr. William B. Wiley is chief of surgery; Dr. J. W. Creef, chief of general practice; Dr. Milton H. Bland, chief of obstetrics and gynecology; and Dr. John A. Byrd, chief of medical service.

Dr. A. R. Southall, Jr.,

Has been named winner of the 1959 distinguished service award given by the Louisa County Junior Chamber of Commerce. He was honored for his work with the football and baseball programs at Louisa County High School and for his civic activities. Dr. Southall has practiced in Louisa for the past six years.

Superintendent of Eastern State Hospital.

Dr. Howard Hicks Ashbury has assumed the duties of superintendent of Eastern State Hospital, Williamsburg. He has been clinical director at Western State Hospital since March 1958. Dr. Ashbury is a native of Baltimore and a graduate in medicine of the University of Virginia.

Dr. A. Epes Harris, Jr.,

Blackstone, has been presented the distinguished service award by the local Junior Chamber of Commerce. He was cited for his unselfish devotion to all people who are in need and for unselfishly rendering service to the bodies and spirits of those in his community.

Fifty Year Club in AMA.

Dr. J. H. McCurry, Cash, Arkansas, advises that he has the approval of the American Medical Association to organize a Fifty Year Club within the Association. He is anxious to hear from physicians who have been in practice fifty years or more who desire to become members of this club, giving their name and a complete address.

The first meeting is to be held in Washington, D. C., at the Clinical Meeting, November 29 to December 2, 1960.

New Location of Sinai Hospital.

On April 24th, the Medical Staff of the Sinai Hospital, Baltimore, wil celebrate the relocation of its quarters by holding a scientific meeting at the new Hospital. A diversified program has been arranged which should interest physicians in all

branches of medicine. Formal presentations will be given by:

Dr. Edward C. Curnen, Jr., Professor of Pediatrics, University of North Carolina.

Dr. Clarence Dennis, Professor of Surgery, State University of New York.

Dr. Saul J. Farber, Associate Professor of Medicine, New York University.

Dr. Louis M. Hellman, Professor of Obstetrics and Gynecology, State University of New York.

Dr. Simon Koletsky, Professor of Pathology, Western Reserve University.

Dr. J. Stauffer Lehman, Professor of Radiology, Hahnemann Medical College.

Dr. Morton L. Levin, Professor of Epidemiology, University of Buffalo.

Dr. Irving M. London, Professor of Medicine, Albert Einstein College of Medicine, Yeshiva University.

Dr. Franz Reichsman, Associate Professor of Medicine and Psychiatry, University of Rochester.

Just five months ago the Hospital was moved from its birthplace and 93 years of residence in Southeast Baltimore, to a new site in the Northwest section of the City.

Dr. C. Whitney Caulkins,

Waynesboro, has been named the winner of the distinguished service award by the local Junior Chamber of Commerce. He was cited for his work as chairman of the successful United Community Fund drive. Dr. Caulkins is president of the Waynesboro Rotary Club.

Memorial to Dr. Blanton.

A house built in 1809 on Church Hill by a prominent Richmond physician will be bought by the Historic Richmond Foundation as a memorial to the late Dr. Wyndham B. Blanton. Dr. Blanton was one of the foundation's founders and its only president until his death on January 6th.

The house was built by Dr. John Adams who practiced in Richmond from 1796 until his death in 1825. He was one of the founders of The Medical Society of Virginia, Mayor of Richmond, a member of the General Assembly and a surgeon in the 19th Regiment of the Virginia militia in the War of 1812. The current restoration plans call for a reproduction of a typical 19th century apothecary shop in the lower level of the house.

Lecture Series.

The lecture series at the Lynchburg Training School and Hospital were formally opened on February 3rd.

The following are some of the future programs to which our readers are invited:

March 14th—Dr. Ian Stevenson, Professor of Psychiatry and Chairman of the Department at the University of Virginia, will discuss Psychotherapy Based on Learning Theory.

March 24th—Dr. Lever Stewart, Assistant Professor of Neurology at the University, will talk on Myasthenia Gravis and Toxic Diseases and Deficiency States Affecting the Central Nervous System.

June 3rd—Dr. Patrick H. Drewry, Jr., Professor of Psychiatry at the Medical College of Virginia, will discuss Deprivation and Anti-social Behavior.

June 6th-8th—A three-day institute devoted to problems of special education in the field of mental retardation. This will be directed by Dr. Frances P. Connor, Associate Professor, Department of Special Education, Columbia University. On the morning of the 8th, there will be a lecture of general interest to the medical and allied professions.

Dr. W. C. Brann,

South Boston, has been elected Illustrious Potentate of Acca Temple Shrine and is the ruler of more than 4,000 Virginia Shriners. He has been active in the Shrine since in the thirties and is a Knight's Commander of the Court of Honor, a rare Masonic honor. An even rarer honor came recently when he was admitted to the Royal Order of Jesters.

Post-Graduate Day at Roanoke Memorial.

The Eleventh Annual Post-Graduate Day of the Roanoke Memorial Hospital will be held in the main auditorium of the Hospital on March 17th. Guest speakers are Dr. Garfield G. Duncan, Professor of Clinical Medicine, Jefferson Medical College, Philadelphia; Dr. Claude Beck, Professor of Cardiovascular Surgery, Western Reserve University, Cleveland; Dr. Russell H. Morgan, Radiologist-in-chief, The Johns Hopkins Hospital, Baltimore; and Dr. Arthur M. Olsen, Associate Professor of Medicine, Mayo Clinic, Rochester.

The program is as follows: For the morning session—Diabetes and Pregnancy by Dr. Duncan; Problem of the "Coin" Lesion on Chest X-Ray by Drs. Morgan and Olsen; Surgical Approach to Coronary Artery Disease by Dr. Beck. The afternoon

session will be held at the Roanoke Hotel and Advances in Diagnosis and Treatment of the Pulmonary Mycoses will be discussed by Dr. Olsen; Cardiac Resuscitation in Surgical and Medical Patients by Dr. Beck; and Oral Hypoglycemic Agents by Dr. Duncan. At the evening session, also held at the Hotel Roanoke, Dr. Morgan will speak on The Problem of Radiation Hazards.

This program is approved for Category One Credit by the American Academy of General Practice.

Dr. T. S. Ely,

Jonesville, has been elected president of the Powell Valley Shrine Club.

Dr. Bliss Passes State Bar Examinations.

Dr. Theodore Bliss, Norfolk, has just passed the Virginia State Bar examinations and plans to open a law office just five blocks from the office where he and his wife now practice medicine jointly. He expects to specialize in medico-legal jurisprudence but will also continue his medical practice. Dr. Bliss and his wife, Dr. Reba Bliss, are natives of London, England, and came to Norfolk in 1947.

Medical Lecture Series.

The Spring Series of Evening Medical Lecture Programs at the University of Virginia began on February 8th. All of these programs are held in the medical school auditorium at 8:00 P.M., and our readers are invited to attend. Future programs are:

March 28th—Psychopharmacology: Present Day Problems and Future Trends—Dr. Joel Elkes, Chief, Clinical Neuropharmacology, St. Elizabeth's Hospital, Washington, D. C.

April 4th—The Renal Tubular Secretion—Reabsorption of Organic Acids by Dr. Gilbert H. Mudge, Department of Pharmacology, School of Medicine, The Johns Hopkins University, Baltimore.

April 11th—Phi Chi Lectureship—A Case Study of Multiple Personality by Dr. Corbett H. Thigpen, Clinical Associate Professor of Psychiatry, Medical College of Georgia, Augusta.

April 18th—The Charles S. Venable Lectureship—Patient Reaction to Trauma by Dr. Frank E. Stinchfield, Director, New York Orthopedic Hospital and Chairman, Department of Orthopedic Surgery, College of Physicians and Surgeons, Columbia Presbyterian Medical Center, New York.

The Research Society of the University will have programs by staff members as follows:

March 14th—Hormones in Insects by Dr. Dietrich Bodenstein; Systemic Desensitization in Psychotherapy by Dr. Joseph Wolpe; A Psychological Interpretation of a Case of Multiple Personality by Drs. Jack D. Hain and Mark H. Congdon.

April 25th—Experimental Reflux Exophagitis by Drs. Phyllis R. Ingram and William H. Muller, Jr.; The Properties of a Strain of Herpes Simplex Virus which Produces Unusually Large Multinucleated Giant Cells in Tissue Culture by Drs. Clayton E. Wheeler, Jr., and Charles M. Canby; and Steady State of Lactic Dehydrogenase Activity Across the Human Placental Barrier by Drs. Nuzhet O. Atuk and Harry S. McGaughey, Jr.

American Board of Obstetrics and Gynecology.

The next scheduled examinations (Part II), oral and clinical for all candidates will be conducted at the Edgewater Beach Hotel, Chicago, by the entire Board from May 11 through 16. Formal notice of the exact time of each candidate's examination will be sent in advance.

The deadline date for the receipt of new and reopened applications for the 1961 examinations is August 1, 1960. Candidates are urged to submit their applications as soon as possible to Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6, Ohio.

Wanted

Male Psychiatrist; Diplomate or with three years approved training; to join group practice 145-bed approved psychiatric hospital. Salary: $15,000-$18,000 first year; $20,000-$25,000 second with incentive factor. Write Box 700, care Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

For Rent

Office Building in Marion, Virginia, 112 North Commerce Street, in center of town. Ideally designed for two physicians or a physician and dentist. All new, one story brick. All rooms paneled in charter birch or knotty pine. Hardwood floors, oil hot water baseboard heat. Adjacent parking area included. Two hospitals in town. Excellent opportunity. Contact James M. Suter, M.D., 712 Chester Street, Bristol, Virginia. (*Adv.*)

Position Desired.

Physician-surgeon, active and healthy, aged sixty-one, desires position of general practitioner in a public or private institution caring for mental or geriatric patients, preferably where research is being undertaken. Contact Dr. Harry G. Clark, 3415-38th Street, Northwest, Washington, D. C. (*Adv.*)

For Sale

General Electric Mobile 200 X-Ray Unit 115/230v 60 Cy. complete with Video Cone. 1958 Model in perfect condition. Term payments can be arranged. Write: Boxholder, Box 667, Marion, Virginia. (*Adv.*)

Obituaries....

Dr. Moir Saunders Martin,

Prominent surgeon of Mount Airy, North Carolina, died January 4th, following a heart attack. He was seventy-six years of age and a graduate of the Medical College of Virginia in 1905. Dr. Martin was chief surgeon at Martin Memorial Hospital for thirty-eight years and served as chairman of the board of trustees of the new Northern Surry Hospital. Martin Memorial School of Nursing bears his name. He had been active in medical and civic affairs of his community and all financial institutions and schools were closed for his funeral. Dr. Martin was a past president of the Kiwanis Club and a Mason.

Dr. Martin had been a member of The Medical Society of Virginia since 1905 and was a member of the Fifty Year Club.

His wife, a son and two daughters survive him.

Dr. Robert Lawrence Corbell, Jr.,

Portsmouth, died January 3rd, at the age of forty-six. He was a graduate of the Medical College of Virginia in 1941 and had practiced in Portsmouth since that time. Dr. Corbell was a veteran of World War II. He had been a member of The Medical Society of Virginia since 1947.

His wife, a son and a daughter survive him.

Dr. John Berchmans Leary,

Formerly of Arlington, died January 1st, at the age of forty-seven. He had practiced in Arlington for twelve years until ill health forced him to give up his practice. He had recently been at the U. S. Army Dispensary at Ft. Myer. Dr. Leary was a past president of the Arlington County Medical Society and the Arlington-Fairfax branch of the Association of American Physicians and Surgeons. He was formerly a member of The Medical Society of Virginia.

Dr. Gatewood.

During the early morning hours of January 5, 1960, death placed its hand upon one of Richmond's most beloved, distinguished and nationally known surgeons, Dr. Emmette Trible Gatewood.

Trible Gatewood was born at "Cowlesville" in James City County, December 6, 1886. He was the son of Richard Emmette Gatewood of "Ben Loman" of Essex County and Nannie Belle Cowles of "Cowlesville," James City County. Both the estates of "Ben Loman" and "Cowlesville" had belonged to his paternal and maternal forebears since the original land grants.

His elementary education was received from the local private schools, and he was graduated from Hickory Neck Academy in James City County. After choosing the field of medicine as a profession, he entered the Medical College of Virginia in 1906 and was graduated in 1910. The next year found him serving his internship at the Bellevue Hospital in New York City. After completing his hospital service at the Norfolk General Hospital, he was married to Miss Belle Winfree Moss of "Booker" in Sussex County, on July 1, 1912. This happy and congenial union proved to be the most inspiring event in his life.

Trible Gatewood took his bride to Toano, where he practiced medicine for two years, drawing patients from the neighboring counties of James City, Charles City and New Kent. Succumbing to his ambitions and a desire for a special service, he spent the next two and a half years completing his residency in Eye, Nose and Throat at the Post Graduate Hospital in New York City. Pursuing his specialty further and wishing to study bronchoscopy, he studied under the original Chevallier Jackson at the University of Pennsylvania. Later he attended the Haslinger Clinic in Vienna, where he perfected the technique of laryngectomy under local anesthesia for carcinoma of the larynx. He and his wife barely escaped from Vienna a few hours after the assassination of the Austrian Prime Minister and a few days

before Hitler's troops entered Austria. Soon after returning to America, he performed the first successful laryngectomy for carcinoma of the larynx in Virginia.

In 1918 he was invited by Dr. Samuel Bowen of Richmond to become his associate. This association lasted until the death of Dr. Bowen. He became an instructor in Otolaryngology at the Medical College of Virginia in 1920 and was appointed Clinical Professor in 1944. In 1958 he was made Professor Emeritus. He was a Director of Johnston-Willis Hospital and was Chairman of its Department of Otolaryngology and Bronchoscopy.

Trible Gatewood contributed many scientific articles to medical journals and was active in many medical societies. He was a former President of the Richmond Academy of Medicine, of the Richmond Nose and Throat Society and the Virginia Society of Ophthalmology and Otolaryngology. He was a former Vice-President of the American Laryngological, Rhinological and Otological Society.

Trible Gatewood was a member of the Tri-State Medical Society, The Medical Society of Virginia, the American Academy of Ophthalmology and Otolaryngology, the American Medical Association, Southern Medical Association, fellow of the American College of Surgeons and a member of the American Laryngological Society. He was also a diplomate of the American Board of Otolaryngology. He was elected in 1940 to membership in the American Laryngological Association, a senior society with a national membership limited to 100 leading laryngologists.

Trible Gatewood's life was an example of continuous post-graduate education. He kept abreast of his specialty by voluminous reading of medical literature and constant pursuit of improved surgical technique. His goal was perfection. His entrance in Virginia caused great advancement in the surgical treatment of the larynx, throat, sinuses and ears. He was a dedicated physician and teacher and an indefatigable worker even in the later years of his life while handicapped with a serious cardiac ailment.

Trible Gatewood was kind and gentle. His manner was quiet and unassuming, yet beneath this quietness ran forces of brilliance, genius and industry. His character, honesty and integrity were above reproach. There were two outstanding devotions in his life—his family and his profession. He was a kind and provident husband and father.

The passing of Trible Gatewood was a great shock to this community, the medical profession, and his many devoted patients, confreres, friends and loved ones.

He is survived by his faithful and devoted wife, two sons, and a brother, Dr. William L. Gatewood.

The Richmond Academy of Medicine, realizing that the satisfaction of an illustrious life well done alleviates partially the pain and sorrow of such an occasion, extends to his bereaved wife and family its sincere and heartfelt sympathy during this sad experience in their lives.

The Committee, Mr. President, proposes that this resolution be adopted and incorporated in the minutes of the Richmond Academy of Medicine and a copy of which be sent to his family.

Donald S. Daniel, M.D.
Edwin Vaughn, M.D.
Dean B. Cole, M.D., *Chairman*

Dr. Padgett.

Hubbard Corbin Padgett was born September 28, 1888, in Bedford County. He died October 31, 1959, as result of multiple injuries received when he was struck by a car in the street near his office, October 22, 1959. His age was 71.

After graduating from New London Academy in Bedford County, he entered the Medical College of Virginia and received the degree of Doctor of Medicine in 1913.

Dr. Padgett then returned to Bedford County, where he soon had a busy general practice and in 1921 he moved to Roanoke, where he continued general practice until his accident.

He was a member of the Roanoke Academy of Medicine, The Medical Society of Virginia, the American Medical Association, Southern Medical Association, Tri-State Medical Society and Association of American Physicians & Surgeons.

Dr. Padgett left behind a host of devoted patients and friends, who feel that he can never be replaced. He was a devoted husband and a kind and loving father.

Be It Therefore Resolved, that the members of the Roanoke Academy of Medicine mourn the passing of Dr. Padgett and extend deepest sympathy to his widow and other members of the family, and

Be It Further Resolved, that a copy of this resolution be sent to Mrs. Ida Virginia Padgett, a copy be spread upon the minutes of The Roanoke Academy of Medicine, and a copy be sent to The Medical Society of Virginia.

Dr. W. B. Huff
Dr. H. A. Sieber
Dr. I. H. Hurt, *Chairman*

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THIRTY-THIRD ANNUAL SPRING CONGRESS

in

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April 4 through April 9, 1960

GUEST SPEAKERS

Leonard Apt, M.D.----------Philadelphia, Pa.
William F. Barry, Jr., M.D.-----Durham, N. C.
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All applications and other documents pertaining to the examination or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 20, 1960. The Secretary of the Board is Dr. K. D. Graves, 631 1st Street, S.W., Roanoke, Virginia.

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March 21 and 22, 1960

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PROGRAM

Monday, March 21.

9:30 A.M.—Current Medical Treatment of Hyper-Cholesterolemia and Hyperlipemia and Atherosclerosis—Dr. Edwin Boyle, Jr., Charleston, S. C.

10:00 A.M.—Recent Surgical Developments in Hypertension and Peptic Ulcer—Dr. Keith S. Grimson, Durham, N. C.

11:00 A.M.—What Do Simple Kidney Function Tests Mean?—Dr. Cheves McC. Smythe, Charleston, S. C.

11:30 A.M.—Neurological Complications of Disease of the Cervical Spine—Dr. Rhett Talbert, Charleston, S. C.

12:00 Noon—Diagnosis and Medical Management of Bleeding Esophageal Varices—Dr. Malcolm P. Tyor, Durham, N. C.

12:30 to 2:00 P.M.—Luncheon Panel
Dr. Grimson, Moderator; Dr. Boyle; Dr. Smythe; Dr. Talbert, and Dr. Tyor

2:00 P.M.—Pulmonary Alveolar Proteinosis—Dr. William Schulze, Greenville, S. C.

2:30 P:M.—The Role of Ascorbic Acid in Human Pathology—Dr. Fred R. Klenner, Reidsville, N. C.

3:30 P.M.—Panel on Psychosomatic Medicine

(a) Dr. Charles Fulghum, Department of Psychiatry and Neurology, Emory University Medical College, Atlanta, Ga.

(b) How the Treatment of Some of the Aged Psychotics Can be Effective—Dr. James Asa Shield, Chief of of Department of Psychiatry and Neurology, Medical College of Virginia, Richmond, Va.

(c) Somatophysic Manifestations of Disease—Dr. Vince Moseley, Chief of Department of Medicine, Medical College of South Carolina, Charleston, S. C.

(d) Psychosomatic Problems in General Practice—Dr. Wililam Hendrix, President of S. C. Chapter of the American Academy of General Practice, Spartanburg, S. C.

(e) General discussion by Drs. Fulghum, Shield, Moseley and Hendrix with questions from the floor.

Tuesday, March 22

8:30 A.M.—Blood Sugar and Urine Sugar Determinations in the Diagnosis and Management of Diabetes—Dr. William R. Jordan, Richmond, Va.

9:00 A.M.—Office Urology—Dr. Kenneth M. Lynch, Jr., Charleston, S. C.

9:30 A.M.—Surgical Treatment of Facial Injuries—Dr. C. C. Coleman, Jr., Charlottesville, Va.

10:00 A.M.—Endocrine Therapy In General Practice—Dr. J. Richard Sosnowski, Charleston, S. C.

11:00 A.M.—The Treatment of Congestive Heart Failure—Dr. Paul D. Camp, Richmond, Va.

11:30 A.M.—The Treatment of Electrolyte Emergencies—Dr. Dana C. Mitchell, Jr., Columbia, S. C.

12:00 Noon—Diagnosis and Treatment of Respiratory Infections in Children—Dr. George Dean Johnson, Spartanburg, S. C.

12:30 to 2:00 P.M.—Luncheon—Panel
Dr. Coleman, Moderator; Dr. Camp; Dr. Lynch; Dr. Mitchell; Dr. Johnson; Dr. Sosnowski; and Dr. Jordan.

2:00 P.M.—Problems in Immunization Against Infectious Diseases—Dr. Samuel F. Ravenel, Greensboro, N. C.

3:00 to 4:30 P.M.—Panel on Thyroid Disease

(a) Problems in Diagnosis and Treatment of Thyroid Disease—Dr. William H. Prioleau, Moderator, Clinical Professor of Surgery, Medical College of South Carolina, Charleston, S. C.

(b) Medical Evaluation in Thyroid Disease—Dr. Ben N. Miller, Senior Visiting Staff, Internal Medicine, Columbia Hospital, Columbia, S. C.

(c) Pathological Pitfalls in the Diagnosis of Thyroid Lesions—Dr. Rawling Pratt-Thomas, Professor of Pathology, Medical College of South Carolina, Charleston, S. C.

(d) Behavior of the Thyroid During Pregnancy—Dr. Luther Talbert, Department of Obstetrics and Gynecology, University of North Carolina, Chapel Hill, N. C.

(e) General Discussion by Drs. Prioleau, Pratt-Thomas and Talbert with questions from the floor.

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Wein, A. B.: The Use of Carisoprodol in Orthopedic Surgery and Rehabilitation. Proceedings of the Symposium on The Pharmacology and Clinical Usefulness of Carisoprodol. Wayne State University Press, Detroit, 1959, p. 156.

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Cooper, C. D., and Epstein, J. H.: The Clinical Evaluation of Carisoprodol by a double-blind technique. Ibid. p. 97.

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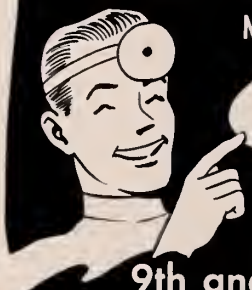
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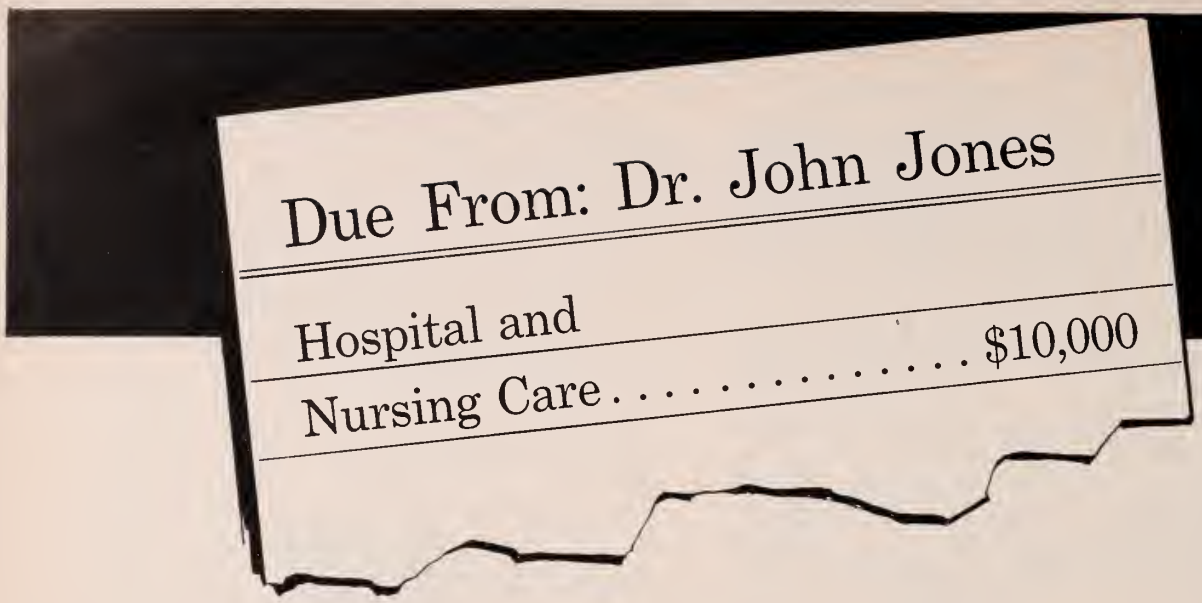


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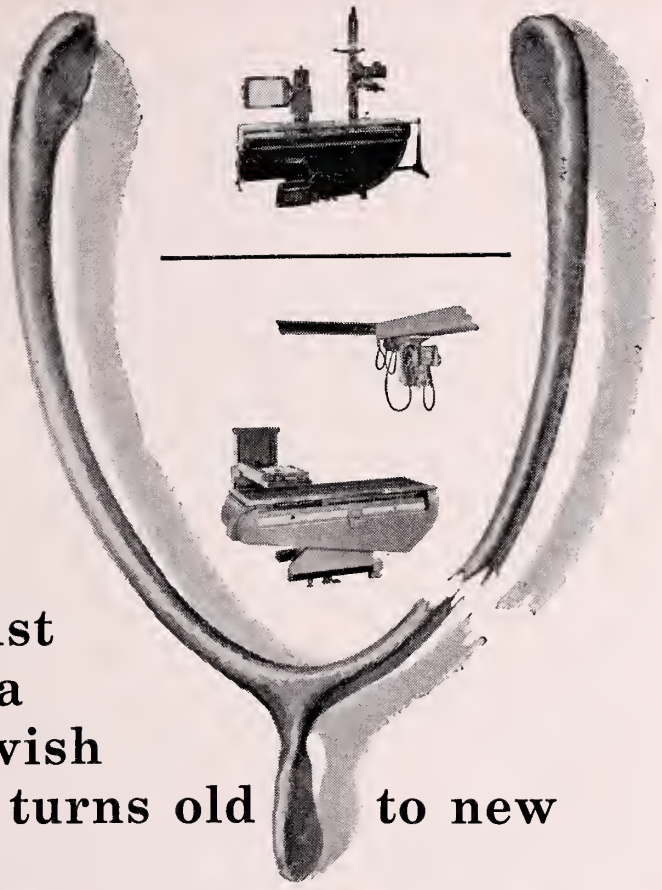
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All other things being equal, the drug of choice is the one to which the pathogen is most susceptible. But if the exigencies of the situation force the physician to a prompt use of antibiotic, a broad-spectrum preparation that produces immediate high blood levels (e.g., tetracycline phosphate complex, TETREX) probably has the best chance of controlling the pathogen.

Later, the laboratory report frequently may indicate that any one of several antibiotic agents would be equally effective against the particular microorganism in question. In such a case other factors such as frequency and severity of side effects, sensitizing potential and toxicity should be considered.

If the acute pharyngitis in question should be due to gram-negative Klebsiella[1], penicillin will be of no value, nor will erythromycin be effective. However, this organism is susceptible to tetracycline. If the pathogen should turn out to be gram-positive Streptococcus or Staphylococcus, then penicillin, erythromycin, and tetracycline may all be effective against it.

Penicillin, however, in addition to having a limited spectrum, also causes many minor and some serious sensitivity reactions. In a recent survey[2] it was found that penicillin produced severe skin reactions. But most important was the observation that anaphylactic shock, with a fatality rate of about 9 per cent, was the most frequent serious reaction. Such severe reactions are almost always associated with parenteral administration.

The tetracyclines (e.g., TETREX) have the advantages of a broad range of antimicrobial activity and low toxicity. And in addition, the physician does not have to trouble himself or his patients with repeated blood studies when he prescribes TETREX. Minor reactions such as gastric upsets or mild skin rashes occur occasionally. The most serious side effects are staphylococcal and monilial overgrowth, but these are rare and can be adequately controlled.

Some Microorganisms Susceptible[a] *to Tetracycline* (TETREX)[b]

Streptococcus; Staphylococcus; Pneumococcus; Gonococcus; Meningococcus; *C. diphtheriae; B. anthracis; E. coli;* Proteus; *A. aerogenes; K. pneumoniae;* Shigella; Brucella; *P. tularensis; H. influenzae; T. pallidum;* Rickettsiae; Viruses of psittacosis and ornithosis, lymphogranuloma inguinale, primary atypical pneumonia; *E. histolytica; D. granulomatosis.*

[a] Some strains are not susceptible.

[b] Table adapted from Goodman, L. S., and Gilman, A.: The Pharmaceutical Basis of Therapeutics, 2nd edition, New York, The Macmillan Co., 1956, pp. 1322-1323.

High blood, body fluid, and tissue levels of active drug are quickly attained when the new phosphate preparation of tetracycline (TETREX) is used.

The semisynthetic tetracyclines have been in constant use since they were introduced in 1952. They have been proved clinically and have established themselves as safe, effective, and valuable antibiotic agents. But the final decision, the choice of agent, and the control of therapy must remain where it has always been, in the hands of the individual physician.

References: 1. Zinsser, H.: A Textbook of Bacteriology. 11th edition, New York, Appleton-Century-Crofts, 1957, p. 409. 2. Welch, H.; Lewis, C. H.; Weinstein, H. L., and Boeckman, B. B.: Severe reactions to antibiotics. A nationwide survey. Antibiotic Med. & Clin. Ther. 4:800 (December) 1957.

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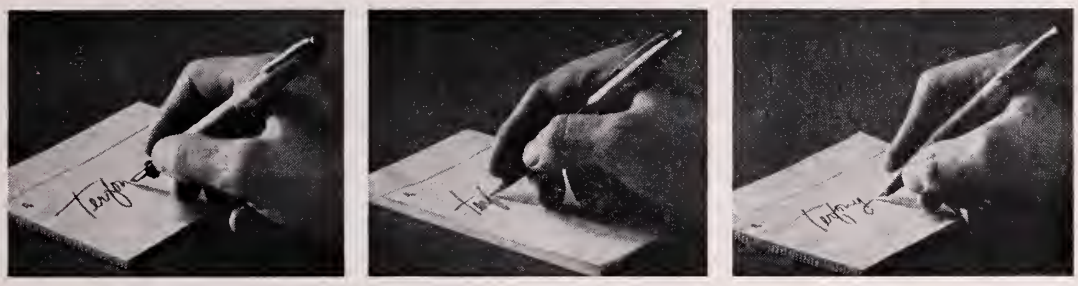


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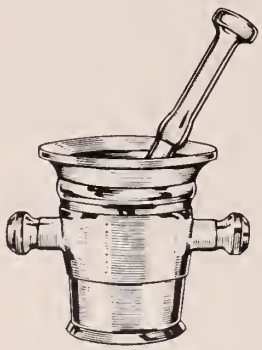
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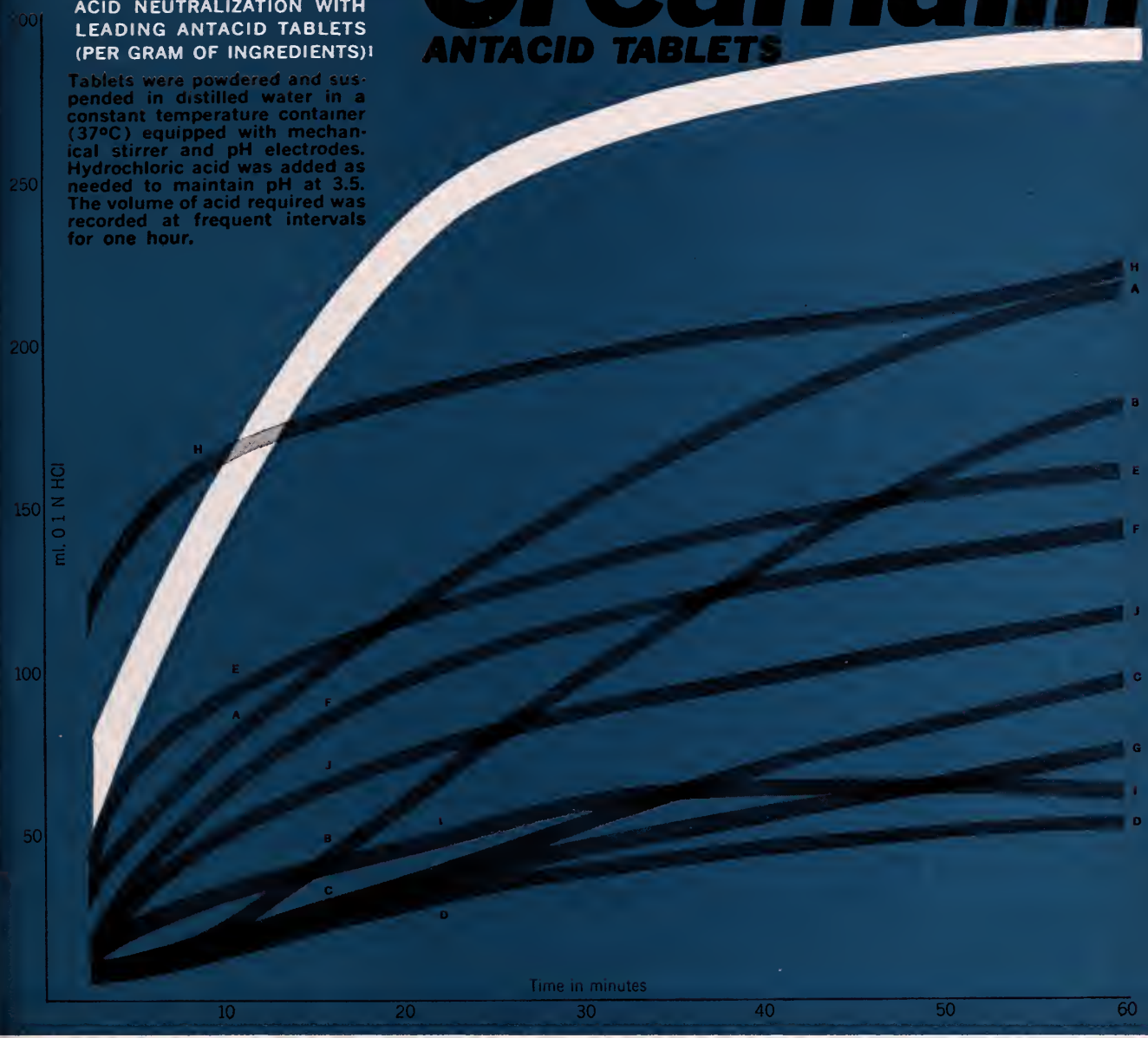
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1. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A. (Scient. Ed.)* 48:380, July, 1959. 2. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A. (Scient. Ed.)* 48:384, July, 1959.

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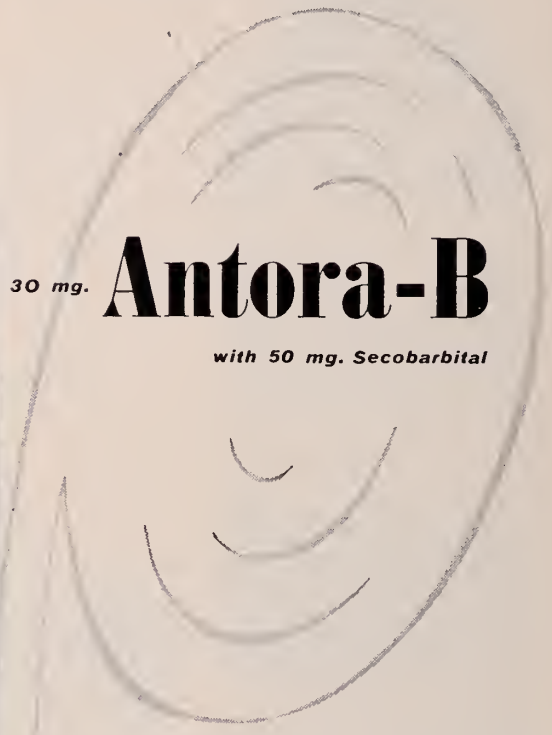
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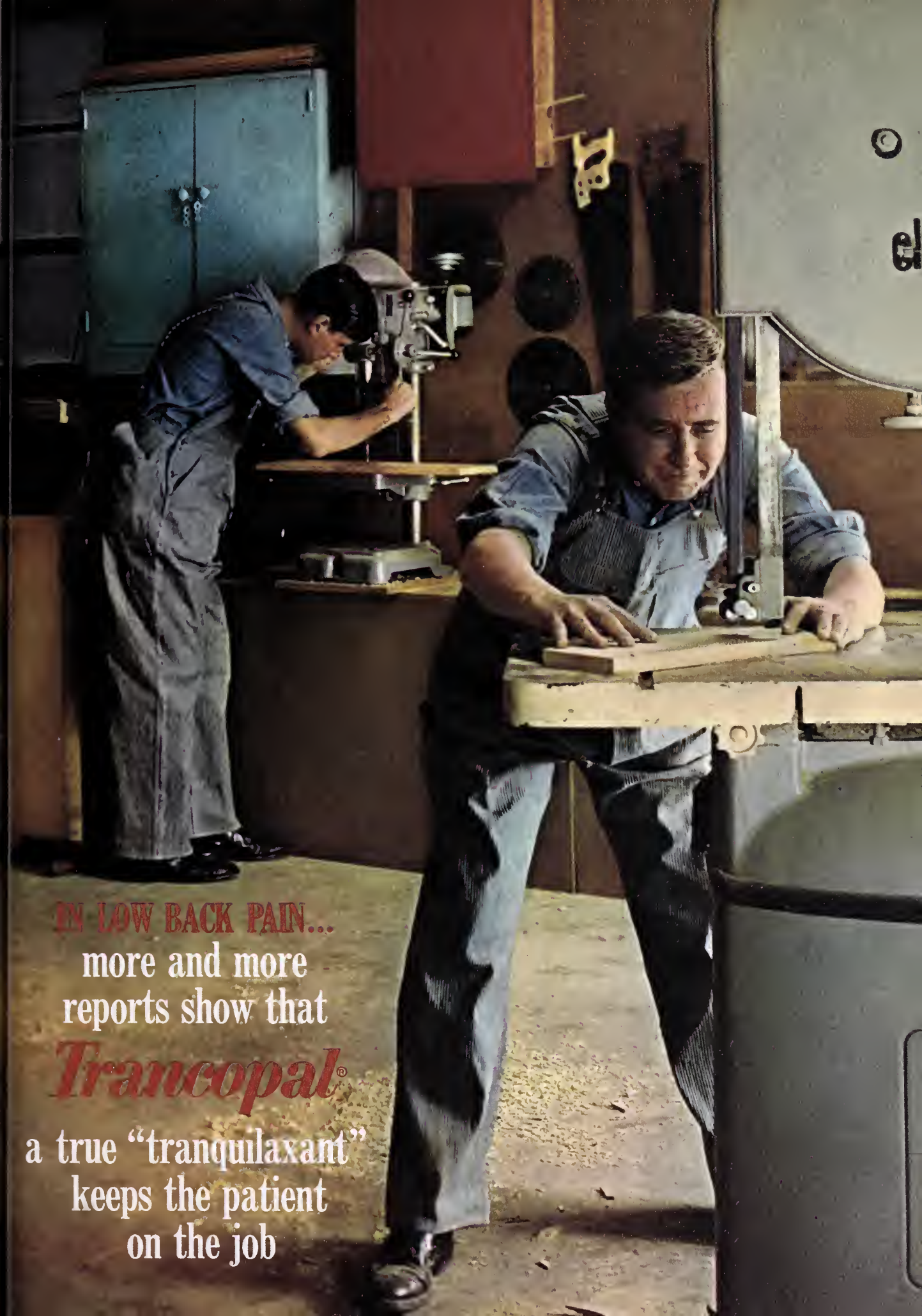
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relieves painful muscle spasm and relaxes the patient



Impressive numbers of patients with low back pain and other musculospastic conditions treated with Trancopal have been freed of symptoms and enabled to return to their usual activities, according to newly published clinical reports. In a recent study by Lichtman,[1] Trancopal brought excellent to satisfactory muscle relaxation to 817 of 879 patients. The patients in this group suffered from skeletal muscle spasm associated with low back pain (361 cases), stiff neck (128 cases), bursitis (177 cases), and other skeletal muscle disorders (213 cases). Side effects were rare (2 per cent of patients), and it was not necessary to discontinue medication in any of the patients. Lichtman comments: "Chlormethazanone [Trancopal] not only relieved painful muscle spasm, but allowed the patients to resume their normal activities with no interference in performance of either manual or intellectual tasks."[2]

When you prescribe Trancopal for musculoskeletal disorders, you can confidently expect that your patients will be relieved of the pain and stiffness. You can be sure of their speedy return to everyday work and recreation.

Mullin and Epifano call Trancopal "...a very effective skeletal muscle spasmolytic."[3] They found that Trancopal brought good to excellent relief to all of 39 patients with skeletal muscle spasm related to trauma, bursitis, rheumatoid arthritis, osteoarthritis, and intervertebral disc syndrome. (No side effects were noted except that one patient had slight dryness of the mouth.)

The pattern is similar in every new series reported: Ganz,[4] DeNyse,[5] Shanaphy[6] and Stough.[7]

Trancopal is a true "tranquilaxant"

Trancopal "...combines the properties of tranquilization and skeletal muscle relaxation with no concomitant change in normal consciousness."[6]

Relieves dysmenorrhea



Trancopal not only is valuable in treating patients with low back pain and other musculoskeletal disorders, but is also very effective in bringing relief from menstrual cramps and discomfort. Shanaphy suggests that Trancopal may help the patient by its combination of muscle relaxant and tranquilizing actions, and he finds that "...the continued use of chlormezanone [Trancopal] as a therapeutic agent in dysmenorrhea is advisable."[6] Trancopal was effective in 82 per cent of his series of 50 patients. In another study, which dealt with 52 adolescent girls and 23 women, Stough[7] reported that Trancopal gave complete or moderate relief in 86.4 per cent.

Alleviates tension

And, of course, Trancopal is also very useful in the treatment of patients in anxiety and tension states. As Ganz says, "...a most valuable drug for relieving tension, apprehension and various psychogenic states... allows the patient to use his energies in a more productive manner in overcoming his basic problems."[4]

Trancopal

a true "tranquilaxant"

that relieves skeletal muscle spasm
and relaxes psychogenic tension
without troublesome side effects,
and keeps the patient on the job.

Indicated for...

Musculoskeletal disorders		Psychogenic disorders
Low back pain (lumbago)	Fibrositis	Anxiety and tension states
Neck pain (torticollis)	Ankle sprain, tennis elbow	Dysmenorrhea
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References: 1. Lichtman, A. L.: Scientific Exhibit, meeting of the International College of Surgeons, Miami Beach, Fla., Jan. 4-7, 1959. 2. Lichtman, A.L.: *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 3. Mullin, W. G., and Epifano, Leonard: *Am. Pract. & Digest Treat.* 10:1743, Oct., 1959. 4. Ganz, S. E.: *J. Indiana M. A.* 52:1134, July, 1959. 5. DeNyse, D. L.: *M. Times* 87:1512, Nov., 1959. 6. Shanaphy, J. F.: *Current Therap. Res.* 1:59, Oct., 1959. 7. Stough, A. R.: *J. Oklahoma M. A.* 52:575, Sept., 1959.

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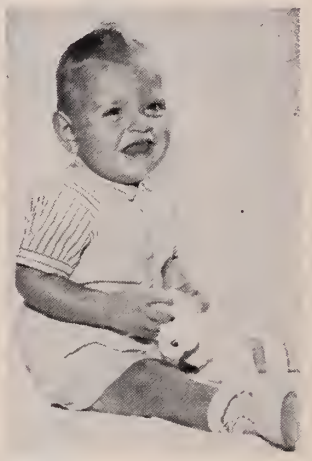
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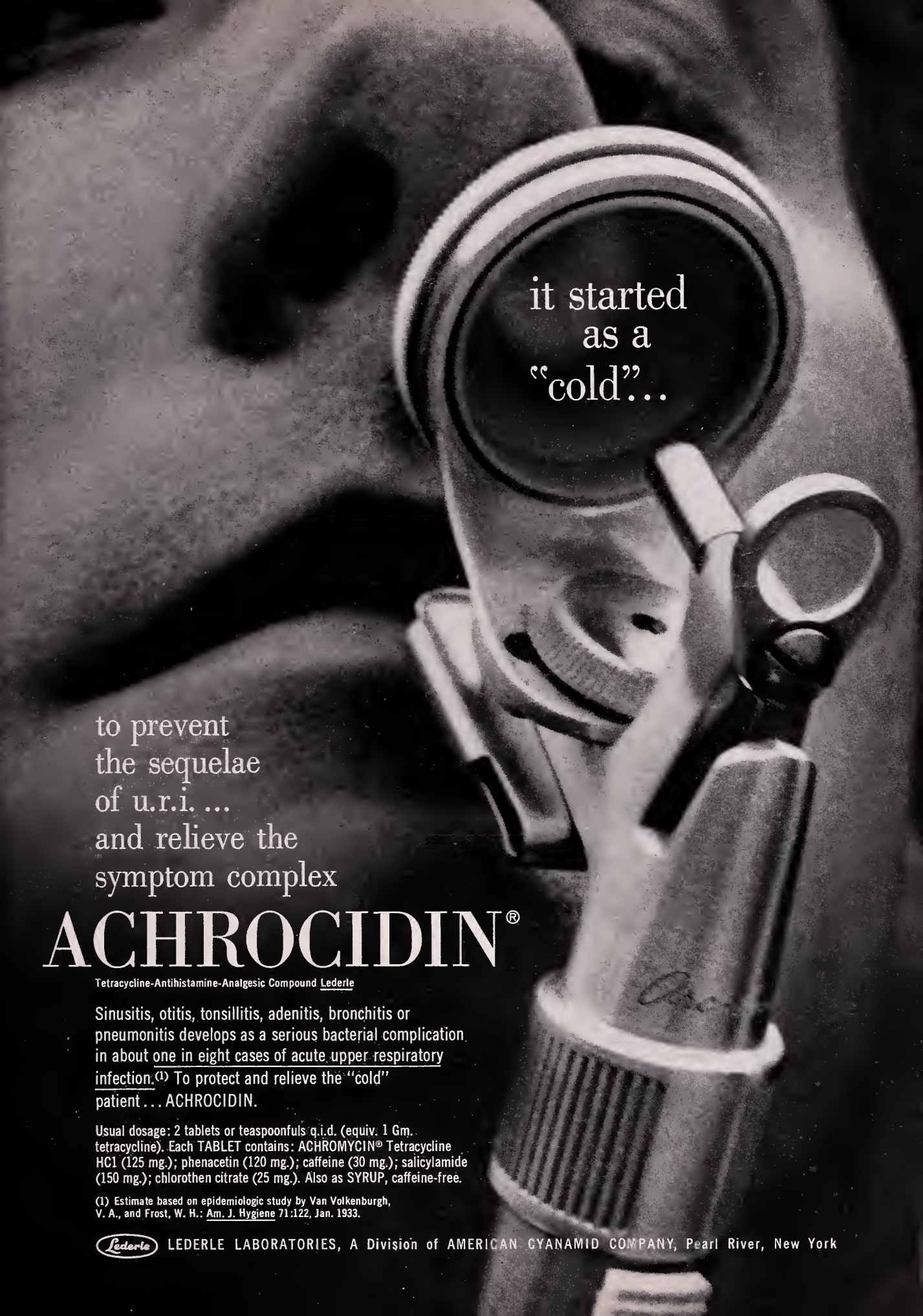
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Sinusitis, otitis, tonsillitis, adenitis, bronchitis or pneumonitis develops as a serious bacterial complication in about one in eight cases of acute upper respiratory infection.(1) To protect and relieve the "cold" patient... ACHROCIDIN.

Usual dosage: 2 tablets or teaspoonfuls q.i.d. (equiv. 1 Gm. tetracycline). Each TABLET contains: ACHROMYCIN® Tetracycline HCl (125 mg.); phenacetin (120 mg.); caffeine (30 mg.); salicylamide (150 mg.); chlorothen citrate (25 mg.). Also as SYRUP, caffeine-free.

(1) Estimate based on epidemiologic study by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122, Jan. 1933.

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Each Bi-layer tablet contains:

Pentylenetetrazol . . .	100 mg.
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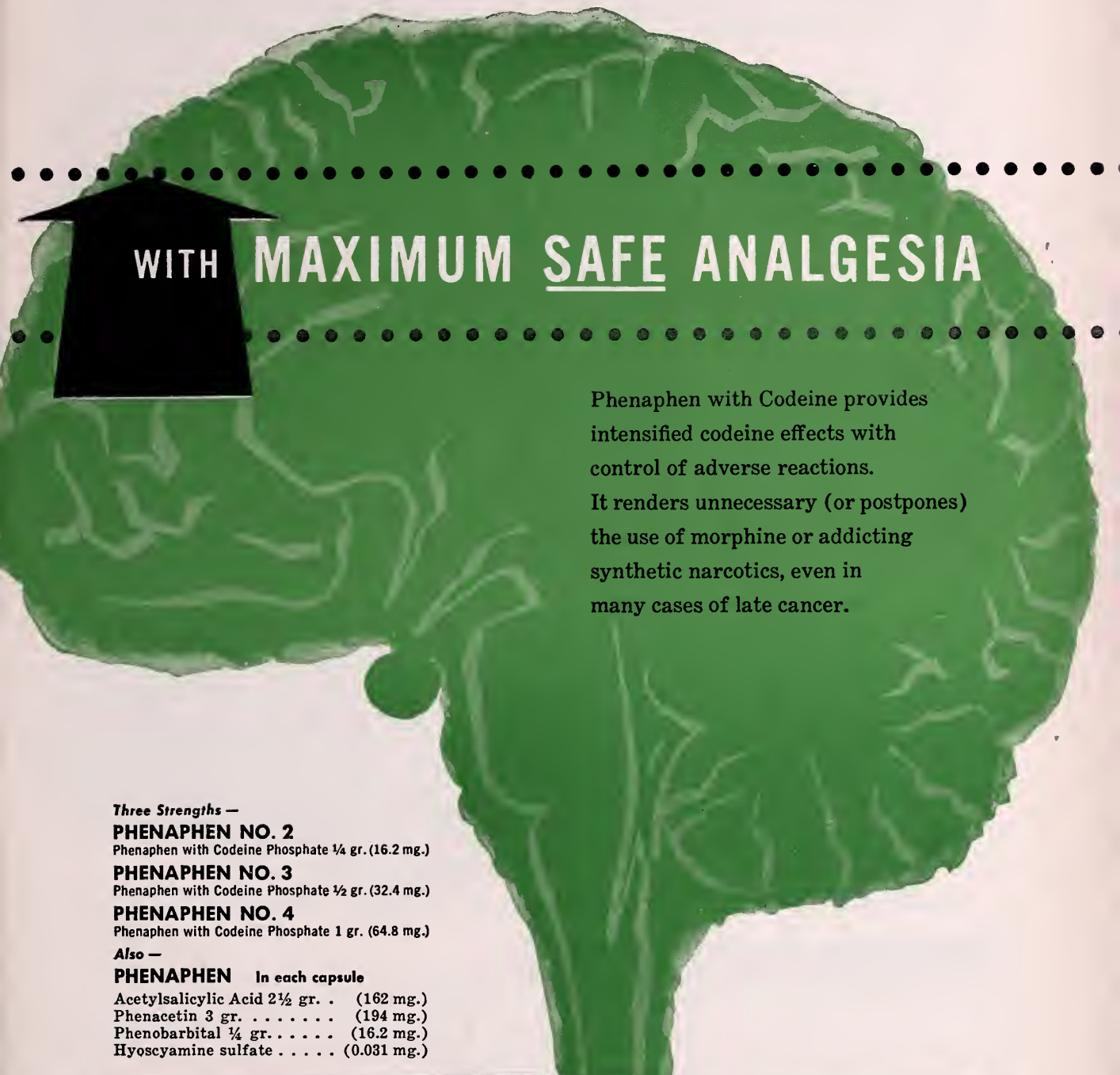
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Tristamine is supplied in two convenient dosage forms—Tristamine Sustained Release Capsules, affording relief for periods up to ten hours, and Tristamine Elixir, a sugar free sorbitol type 'syrup' that will appeal to children and adults who prefer liquid medication.

CAUTION:

Federal law prohibits dispensing without prescription.

Contained Antihistamine	Dosage Range	Median Dose	Amount in 20.0 mg. of Tristamine	Percentage of Individual Median Dose
Phenyltoloxamine Citrate	25 mg.	25 mg.	6.25 mg.	25.0%
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Chlorpheniramine Maleate	2-4 mg.	3 mg.	1.25 mg.	41.7%
Percentage of Median Combined Dose of the three contained antihistamines in 20.0 mg. Tristamine				100.0%

PACKAGING:
Sustained Release Capsules, 60 mg., Bottles of 30, 100 and 1000.
Liquid, 10 mg./5 cc., Bottles of one pint and one gallon.

DOSAGE:

Tristamine Capsules 60 Mg. (Sustained Release) Adults, One capsule every twelve hours, morning and night or at breakfast and supper. In unusually resistant cases it may be desirable to give one capsule every eight hours.

Tristamine Liquid (10 mg./5cc.)
Adults, two teaspoonfuls four times daily; **Children 12 to 16,** one to two teaspoonfuls three to 4 times daily; **Children 6 to 12,** One teaspoonful; **Children under six,** one-fourth to one-half teaspoonful.

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NIAMID®
the mood brightener

eases mental adjustment to menopause

NIAMID brightens the outlook of depressed menopausal patients—gradually helps them become alert, cheerful, relaxed, and better able to cope with their surroundings.

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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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Squibb Alpha-Phenoxyethyl Penicillin Potassium

new chemically improved penicillin which provides the highest blood levels that are obtainable with oral penicillin therapy



As a pioneer and leader in penicillin therapy for more than a decade, Squibb is pleased to make Chemipen, a new chemically improved oral penicillin, available for clinical use.

With Chemipen it becomes possible as well as convenient for the physician to achieve and maintain higher blood levels—with greater speed—than those produced with comparable therapeutic doses of potassium penicillin V. In fact, Chemipen is shown to have a 2:1 superiority in producing peak blood levels over potassium penicillin V.*

Extreme solubility may contribute to the higher blood levels that are so notable with Chemipen.* Equally notable is the remarkable resistance to acid decomposition (Chemipen is stable at 37°C. at pH 2 to pH 3), which in turn makes possible the convenience of oral treatment.

And the economy for your patients will be of particular interest—Chemipen costs no more than comparable penicillin V preparations.

Dosage: Doses of 125 mg. (200,000 u.) or 250 mg. (400,000 u.), t.i.d., depending on the severity of the infection. The usual precautions must be carefully observed with Chemipen, as with all penicillins. Detailed information is available on request from the Professional Service Department.

Supply: Chemipen Tablets of 125 mg. (200,000 u.) and 250 mg. (400,000 u.), bottles of 24 tablets. Chemipen Syrup (cherry-mint flavored, nonalcoholic), 125 mg. per 5 cc., 60 cc. bottles.

*Knudsen, E. T., and Rolinson, G. N.: Lancet 2:1105 (Dec.19)1959.

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94 to 6 BONADOXIN® stops morning sickness

When she asks "Doctor, what will it be?" you can either flip a coin or point out that 51.25% births are male.[1] But when she mentions morning sickness, your course is clear: BONADOXIN.

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1. Projection from Vital Statistics, U.S. Government Dept. HEW, Vol. 48, No. 14, 1958, p. 398.
2. Modell, W.: Drugs of Choice 1958-1959, St. Louis, C. V. Mosby Company, 1958, p. 347.

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brand of phenylbutazone

in arthritis and allied disorders

proved by a decade of experience

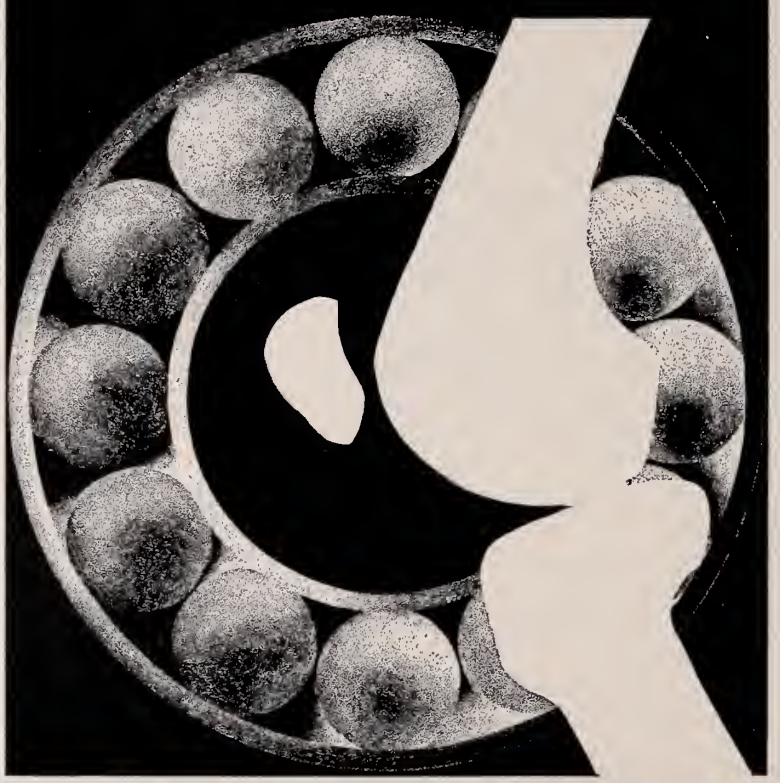
Ten years of experience in countless cases—more than 1700 published reports—have now established the eminence of Butazolidin among the potent non-hormonal antiarthritic agents.

Repeatedly it has been demonstrated that Butazolidin:
Within 24 to 72 hours produces striking relief of pain.
Within 5 to 10 days affords a marked improvement in mobility and a significant subsidence of inflammation with reduction of swelling and absorption of effusion.

Even when administered over months or years Butazolidin does not provoke tolerance nor produce signs of hormonal imbalance.

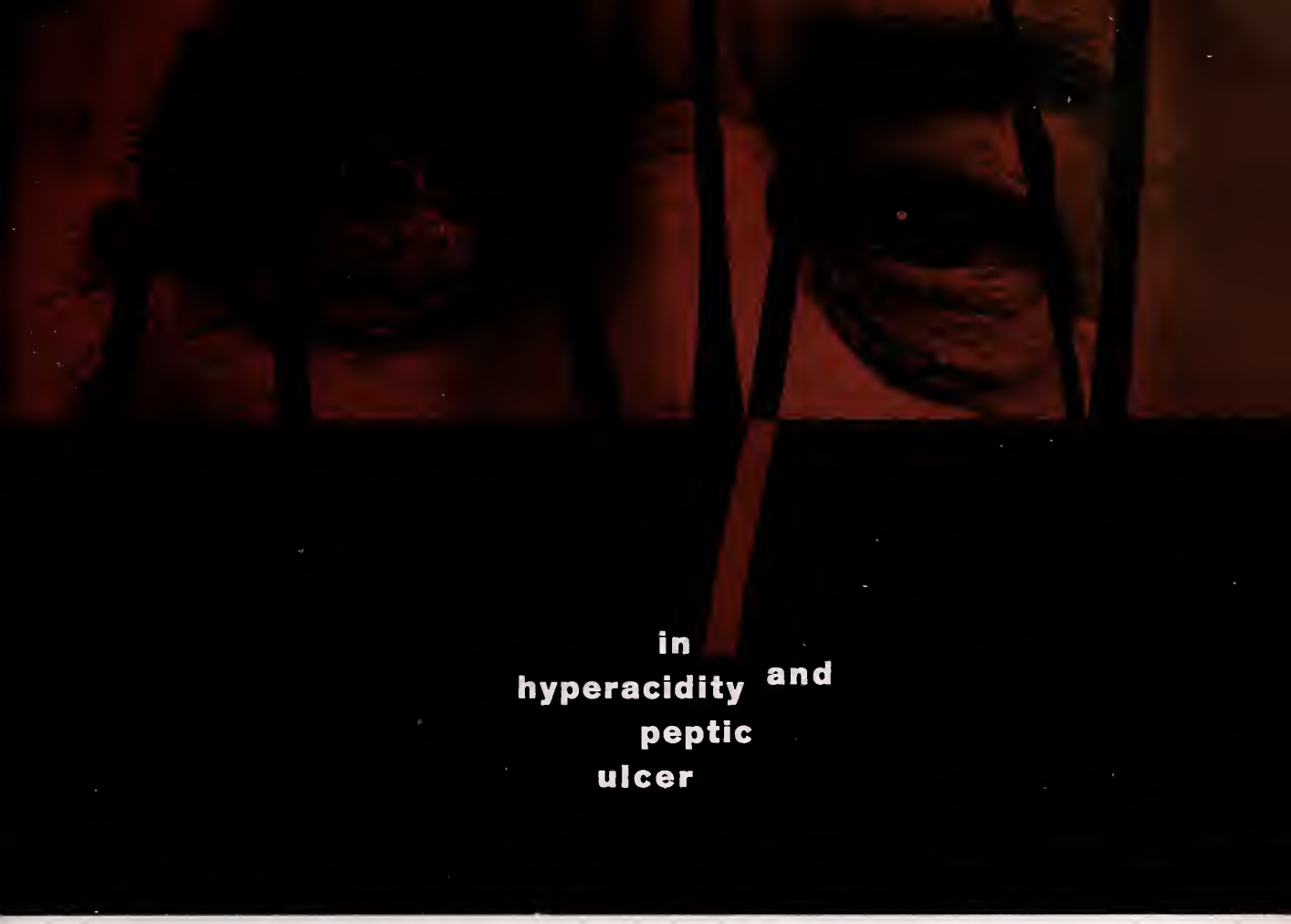
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Geigy

BU 7-60



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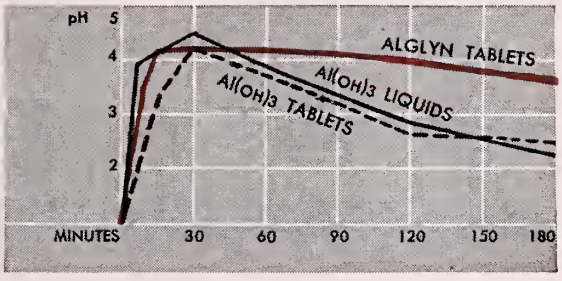
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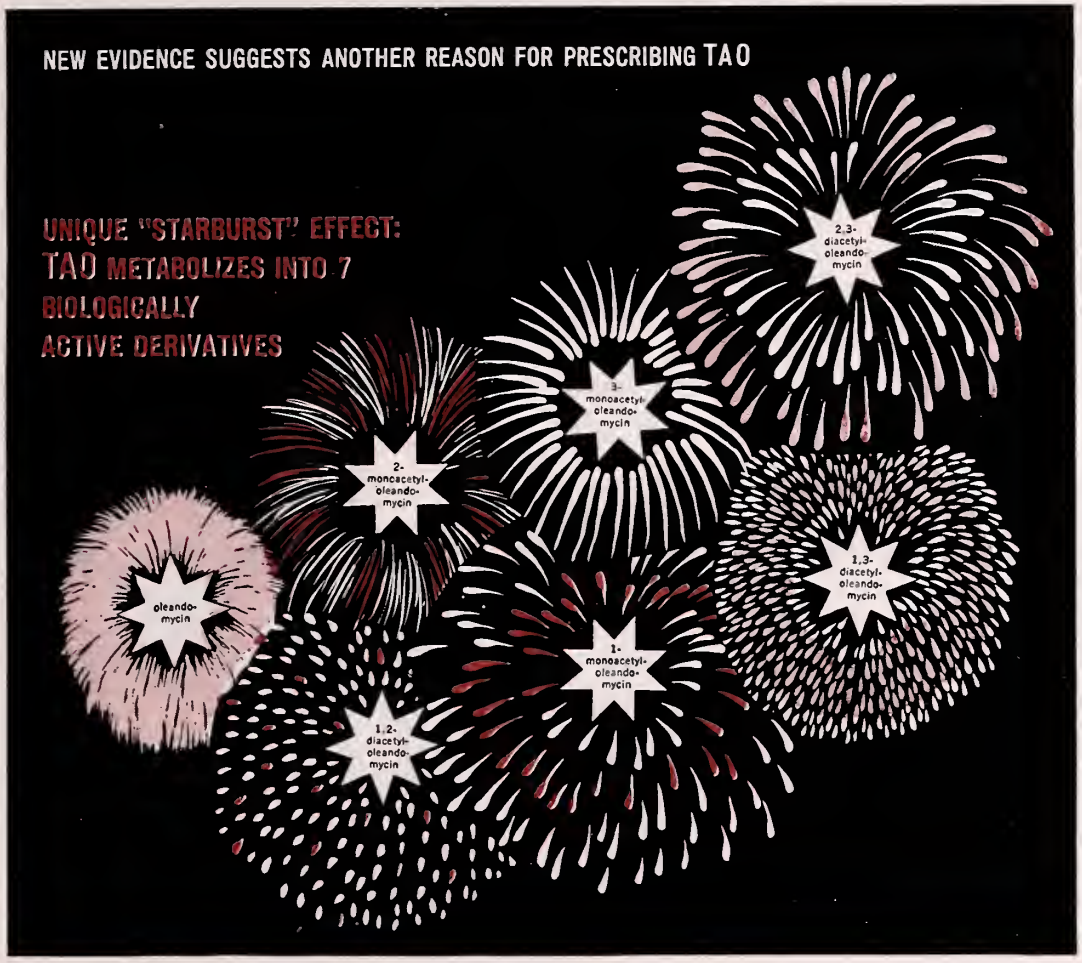
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INDEX TO ADVERTISERS

Abbott ---- 9, 76
American Health ---- 89
Ames Company, Inc. ---- Inside Back Cover
Appalachian Hall ---- 60
Ayerst Laboratories ---- 33
Brayten ---- 101
Bristol ---- 12-13, 14-15, 74
Burroughs Wellcome Co. ---- 43-44
Ciba ---- 17, 79
Davies, Rose & Company, Limited ---- 71
Drug Specialties ---- 27
Dyer, David A. ---- 72
Eli Lilly and Company ---- 56
Endo Laboratories ---- 49
First & Merchants ---- 70
Gill Memorial Eye, Ear and Throat Hospital, Inc. ---- 58
Geigy ---- 39, 100
General Electric ---- 73
Glenbrook ---- 42
Jefferson, A. G. ---- 75
Johnston-Willis Hospital ---- 63
Jones and Vaughan ---- 7
Lederle ---- 16, 19-26, 40-41, 78, 91
Lorillard ---- 65
Mayrand, Inc. ---- 84
Medicine in Virginia ---- 63
Merck Sharp & Dohme ---- 5, 11, 96
Parke, Davis & Company ---- Second Cover-3
People's Service Drug Stores ---- 80
Pfizer Laboratories ---- 32, 37, 95, 99
Physicians Products Co. ---- 18, 94
Plyer's Nursing Home, Mrs. ---- 61
Raleigh Hotel ---- 70
Richmond Eye Hospital: Richmond Ear, Nose and Throat Hospital ---- 58
Richmond Hotels Incorporated ---- 75
Riverside Convalescent Home ---- 64
Robins, A. H. Company ---- 38, 93
Roche Laboratories ---- 46-47
Roerig ---- 50-51, 98, 103
Saint Albans ---- 59
Schering ---- 45, 55, 102
Searle ---- 57
Smith-Dorsey ---- 104
Smith Kline & French Laboratories ---- Back Cover
Squibb ---- 30-31, 36, 77, 90, 97
St. Elizabeth's Hospital ---- 60
St. Luke's Hospital ---- 61
St. Paul-Western Insurance Companies ---- 70
State Board of Medical Examiners, The ---- 63
Stuart Circle Hospital ---- 59
Terrace Hill Nursing Home ---- 64
Tri-State Medical Assn. ---- 66
Tucker Hospital, Inc. ---- 63
United States Brewers Foundation ---- 10
Upjohn ---- 28-29
U. S. Vitamin and Pharmaceutical Corp. ---- 52-53
Vale Chemical Co. ---- 48, 92
Valentine Company, Inc. ---- 71
Wallace Laboratories ---- 34-35, 67-68, 69
Wesson Oil ---- 82-83
White Cross Hospital ---- 62
Williams Printing Co. ---- 75
Winthrop Laboratories ---- 54, 81, 85-88



The impression that TAO is an unusually active antibiotic has steadily gained recognition by impressive clinical performance. Now come reports of in vivo and in vitro biological and biochemical evaluations that show TAO to be indeed unique.[1,2]

TAO differs from other antibiotics in that it is metabolized to multiple active compounds which remain active throughout their presence in the body. These 7 derivatives (in addition to TAO) show activity against common Gram-positive pathogens, including resistant strains of Staph. aureus.

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1. English, A. R., and McBride, T. J.: Proc. Soc. Exper. Biol. & Med. 100:880 (Apr.) 1959. 2. Celmer, W. D.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 277. 3. English, A. R., and Fink, F. C.: Antibiotics & Chemother. 8:420 (Aug.) 1958.

designed for superior control of common Gram-positive infections

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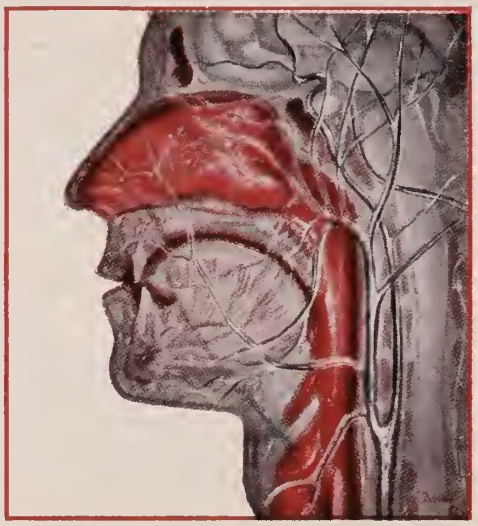
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reaches all nasal and paranasal membranes *systemically*[1]



Pharmacologically balanced formula for prompt symptomatic relief

- in nasal and paranasal congestion
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- in allergic reactions of the upper respiratory tract

Triaminic*[2,3] *is safer and more effective than topical medication

- transported systemically to *all* respiratory membranes
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- presents no problem of rebound congestion
- avoids "nose drop addiction"

Each Triaminic timed-release Tablet provides:
Phenylpropanolamine HCl.....50 mg.
Pheniramine maleate.....25 mg.
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Dosage: 1 tablet in the morning, midafternoon and at bedtime. In postnasal drip, 1 tablet at bedtime is usually sufficient.

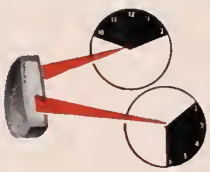
Each timed-release Triaminic Juvelet® provides: ½ the formulation of the Triaminic Tablet.

Dosage: 1 Juvelet in the morning, midafternoon and at bedtime.

Each tsp. (5 ml.) of Triaminic Syrup provides: ¼ the formulation of the Triaminic Tablet.

Dosage (to be administered every 3 or 4 hours): *Adults* — 1 or 2 tsp.; *Children 6 to 12* — 1 tsp.; *Children 1 to 6* — ½ tsp.; *Children under 1* — ¼ tsp.

Relief is prompt and prolonged because of this special timed-release action:



first — the outer layer dissolves within minutes to produce 3 to 4 hours of relief

then — the core disintegrates to give 3 to 4 *more* hours of relief

1. Fabricant, N. D.: E.E.N.T. Monthly *37*:460 (July) 1958.
2. Lhotka, F. M.: Illinois M. J.: *112*:259 (Dec.) 1957.
3. Farmer, D. F.: Clin. Med. *5*:1183 (Sept.) 1958.

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WHY IS DIABETES IN INFANTS SO DIFFICULT TO DIAGNOSE?

Because of the infrequency of the disease in this age group, its sudden onset, the profusion of inconsistent presenting symptoms, and because the accompanying symptoms of anorexia and vomiting are also characteristic symptoms of many other ills of infancy.

Source: Traisman, H. S.; Boehm, J. J., and Newcomb, A. L.: Diabetes *8*:289, 1959.

for those pediatric puzzlers..."A routine urinalysis and blood sugar should be done whenever the possibility of diagnosing diabetes is entertained."*

DIABETES MELLITUS AT AGES 1 TO 5

Order of Frequency of Presenting Symptoms in 110 Patients

Symptoms	No. of Patients	Per cent of total group
Polyuria	93	84.5
Polydipsia	89	81.0
Weight loss	47	42.7
Polyphagia	28	25.4
Anorexia	16	14.5
Lethargy	14	12.7
Enuresis	7	6.4
Vomiting	5	4.5
Irritability	3	2.7
"Craving for sweets"	3	2.7
"Sticky diaper"	3	2.7
"Strong odor to urine"	2	1.8
Glycosuria	2	1.8
Hypoglycemia	2	1.8
Personality change	1	0.9
Boils	1	0.9
Headache	1	0.9
Abdominal cramps	1	0.9

Adapted from Traisman, H. S.; Boehm, J. J., and Newcomb, A. L.*

the standardized urine-sugar test for reliable quantitative estimations

AMES COMPANY, INC. Elkhart, Indiana Toronto, Canada

COLOR-CALIBRATED CLINITEST®

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- **full-color calibration, clear-cut color changes**
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- **"urine-sugar profile" graph for closer control**

IN ANXIETY—RELAXATION RATHER THAN DROWSINESS

STELAZINE®

brand of trifluoperazine

'Stelazine' has little if any soporific effect. "... patients who reported drowsiness as a side effect mentioned that they did not fall asleep when they lay down for a daytime nap. It is quite possible that, in some instances, 'drowsiness' was confused with unfamiliar feelings of relaxation."[1]

'Stelazine' is unique among tranquilizers because it relieves anxiety whether expressed as agitation and tension or as apathy, listlessness and emotional fatigue.

Available for use in everyday practice: Tablets, 1 mg., in bottles of 50 and 500; and 2 mg., in bottles of 50.

1. Goddard, E.S.: in *Trifluoperazine, Further Clinical and Laboratory Studies*, Philadelphia, Lea & Febiger, 1959.

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leaders in psychopharmaceutical research



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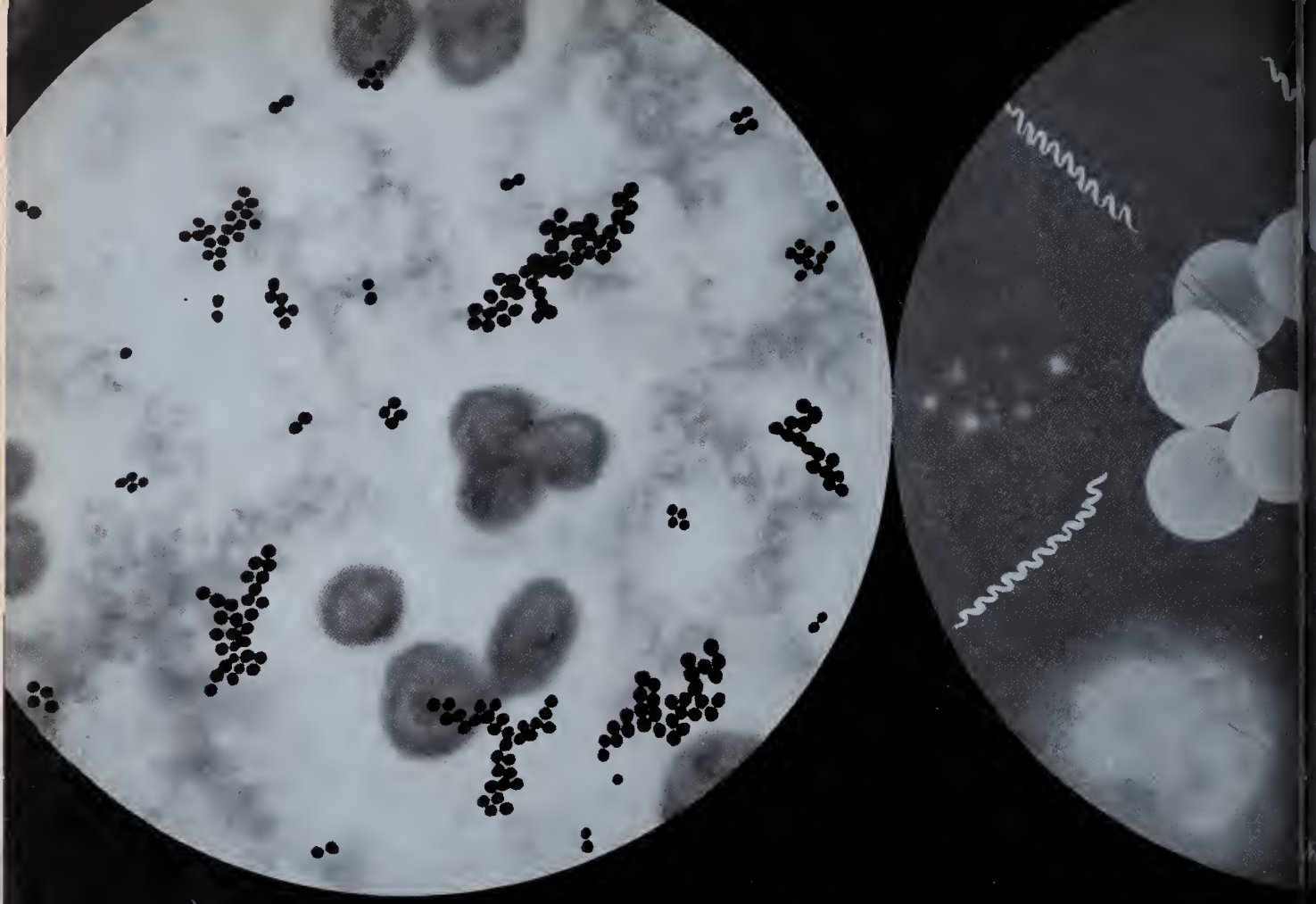
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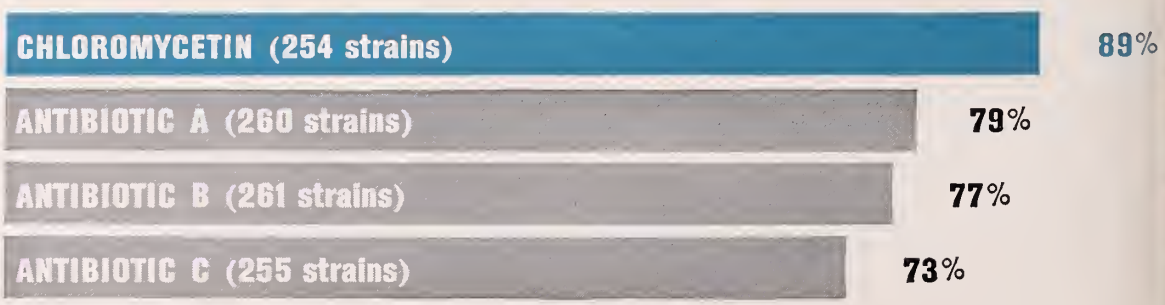


TRUE BROAD-SPECTRUM COVERAGE ...PROVED CLINICAL EFFICACY

In the struggle against sepsis, CHLOROMYCETIN—effective "...against most bacteria, Rickettsia, Treponema, and some viruses..."[1]—has proved a dependable weapon in a variety of infections.

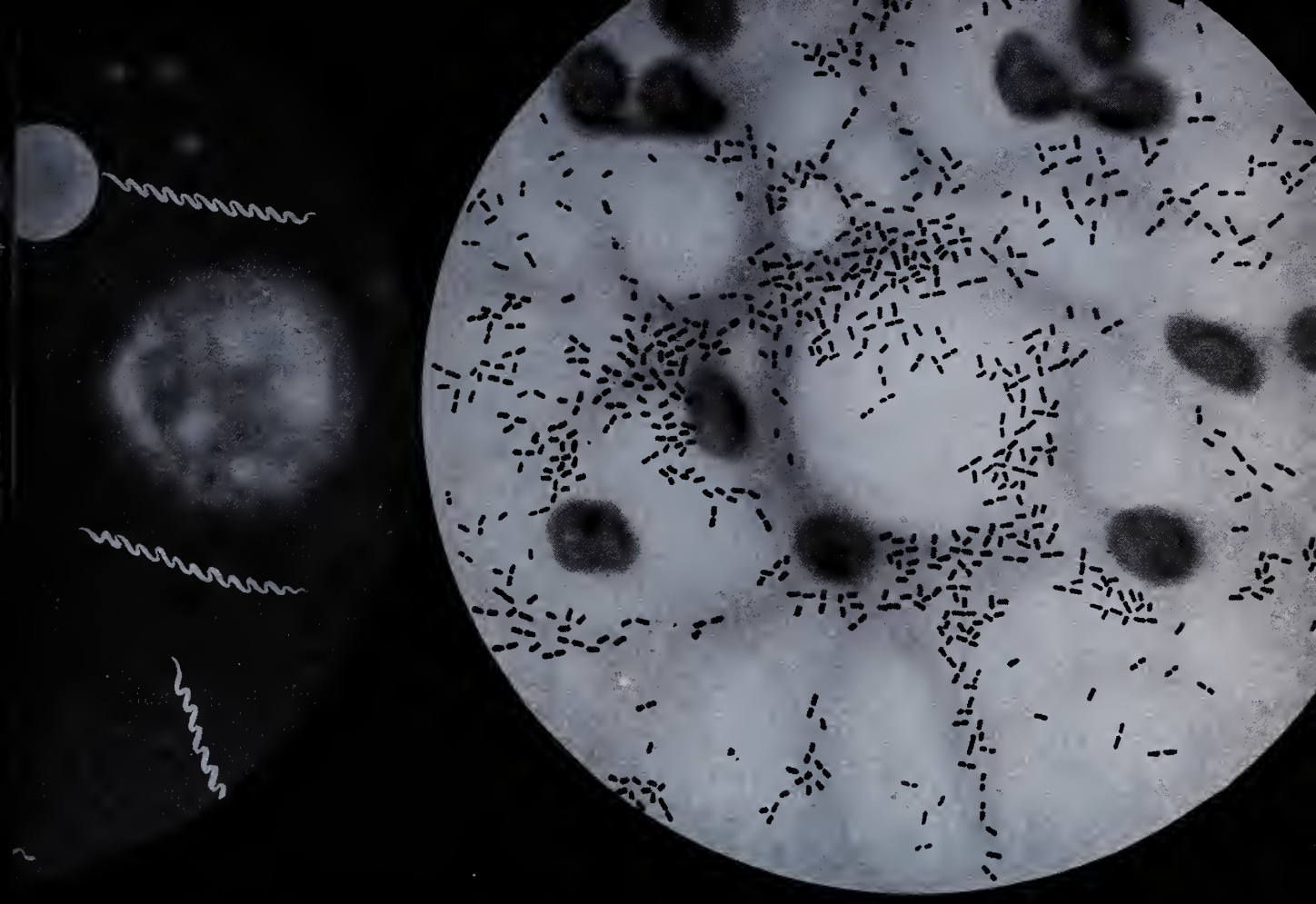
"Over 90 per cent of staphylococci isolated from infections in most institutions are relatively sensitive to chloramphenicol."[2] In a study of a significant number of gram-negative organisms it was found that CHLOROMYCETIN was more effective in *in vitro* sensitivity tests than were other widely used broad-spectrum antibiotics.[3] Moreover, through the years, the incidence of strains of bacteria resistant to CHLOROMYCETIN has remained virtually constant and strikingly low.[4-7]

IN VITRO SENSITIVITY OF GRAM-POSITIVE ORGANISMS TO CHLOROMYCETIN AND TO THREE OTHER BROAD-SPECTRUM ANTIBIOTICS*



*Adapted from Leming & Flanigan.[3]

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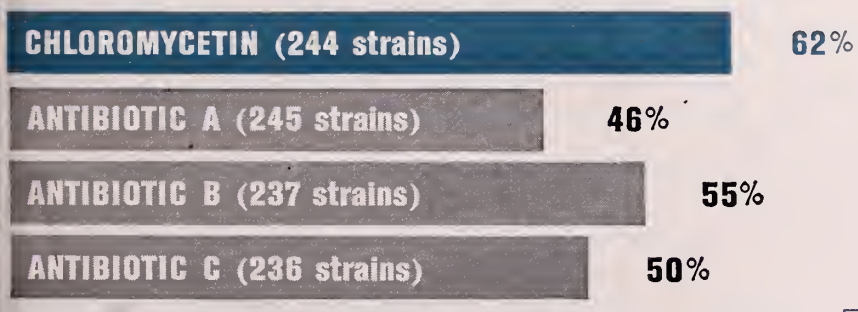
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References: (1) Morton, J. J.: *Yale J. Biol. & Med.* **31**:397, 1959. (2) Rogers, D. E., & Louria, D. B.: *New England J. Med.* **261**:86, 1959. (3) Leming, B. H., Jr., & Flanigan, C., Jr., in Welch, H., & Marti-Ibañez, F.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 414. (4) Edwards, T. S.: *Am. J. Ophth.* **48**:19, 1959. (5) Olarte, J., & de la Torre, J. A.: *Am. J. Trop. Med.* **18**:324, 1959. (6) Suter, L. S., & Ulrich, E. W.: *Antibiotics & Chemother.* **9**:38, 1959. (7) Holloway, W. J., & Scott, E. G.: *Delaware M. J.* **30**:175, 1958.

IN VITRO SENSITIVITY OF GRAM-NEGATIVE ORGANISMS TO CHLOROMYCETIN AND TO THREE OTHER BROAD-SPECTRUM ANTIBIOTICS*



*Adapted from Leming & Flanigan.[3]

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TABLE OF CONTENTS

GUEST EDITORIAL
Watch Out!—*F. Clyde Bedsaul, M.D.* ---- 175
ORIGINAL ARTICLES
Ferrous Fumarate in the Treatment of Iron Deficiency Anemia—*Harold S. Feldman, M.D.* ---- 177
Cytological Diagnosis of Uterine Cancer—*Harry M. Nelson, M.D., Esther M. Dale, M.D.,* and *Gerald S. Wilson, M.D.* ---- 181
The Oral Cholangiogram—*Frank W. Gearing, Jr., M.D.* and *N. M. Canter, M.D.* ---- 186
The Typhoidal Carrier and Cholelithiasis—*R. N. deNiord, Jr., M.D.,* and *William T. Pugh, M.D.* ---- 193
The Treatment of Advanced Mammary Carcinoma—*Vincent P. Hollander, M.D.,* and *E. Meredith Alrich, M.D.* 195
Kaposi's Disease—*Saul Kay, M.D.* ---- 198
Idiopathic Perforation of the Stomach in the Newborn—*George D. Vermilya, M.D., F. A. McCue, M.D.,* and *D. A. Cunningham, M.D.* ---- 202
Missed Abortion and Fibrinogenopenia—*Norman S. Propper, M.D.* ---- 205
The Teeth—*T. Stacy Lloyd, Jr., M.D.* ---- 208
MENTAL HEALTH
Bright Children Can Have Problems ---- 209
PRE-PAID MEDICAL CARE
The Profession's Role ---- 212
PUBLIC HEALTH
Infectious Hepatitis ---- 214
THE MEDICAL SOCIETY OF VIRGINIA
Council Minutes ---- 217
WOMAN'S AUXILIARY ---- 220
EDITORIAL
Our Land Some Day and Uniform Forms—*Ennion S. Williams, M.D.* ---- 221
SOCIETY ACTIVITIES ---- 223
NEWS NOTES ---- 224
OBITUARIES ---- 226

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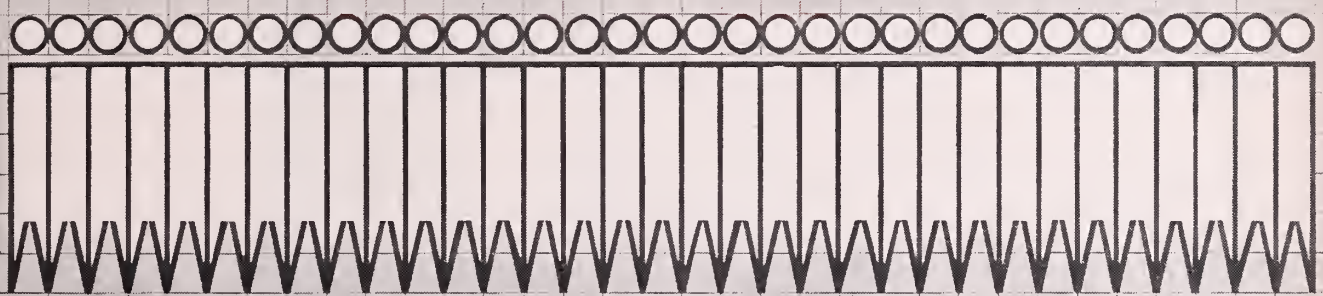
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INDEX TO ADVERTISERS—Page 90

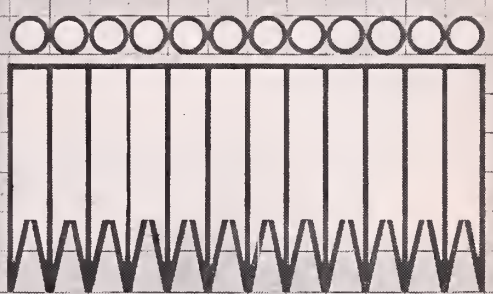
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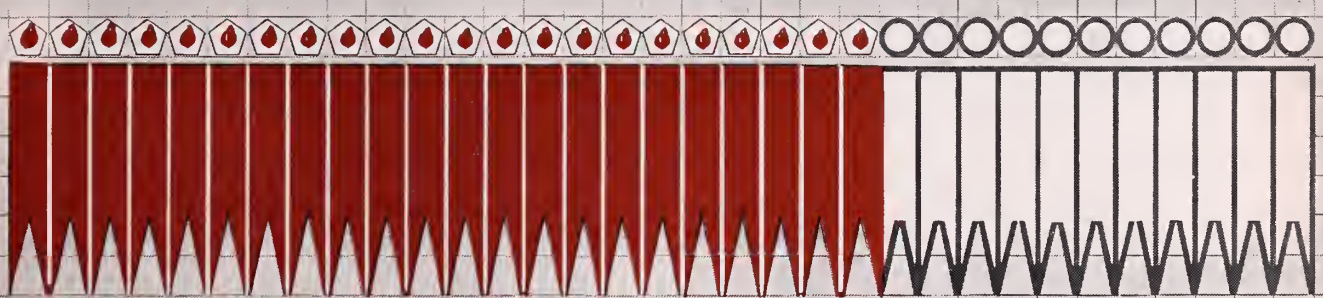
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treats more patients more effectively...



Of 45 arthritic patients who were refractory to other corticosteroids*





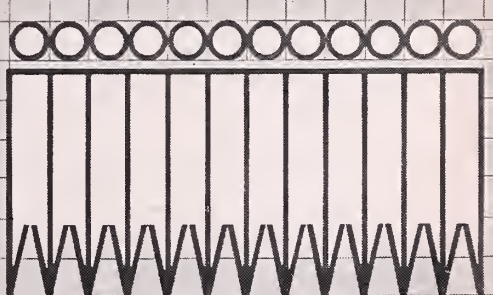
22 were successfully treated with Decadron[1,2]

1. Boland, E. W., and Headley, N. E.: Paper read before the Am. Rheum. Assoc., San Francisco, Calif., June 21, 1958.
2. Bunim, J. J., et al.: Paper read before the Am. Rheum. Assoc., San Francisco, Calif., June 21, 1958.

*Cortisone, prednisone and prednisolone.

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NEW RALDRATE NOW SOLVES THE PROBLEM OF TASTE RESISTANCE TO CHLORAL-HYDRATE

10 Grains (U.S.P. Dose) of palatable lime flavored chloral-hydrate syrup in each teaspoonful

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Not far from here are manufactured
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They are physiologically standardized,
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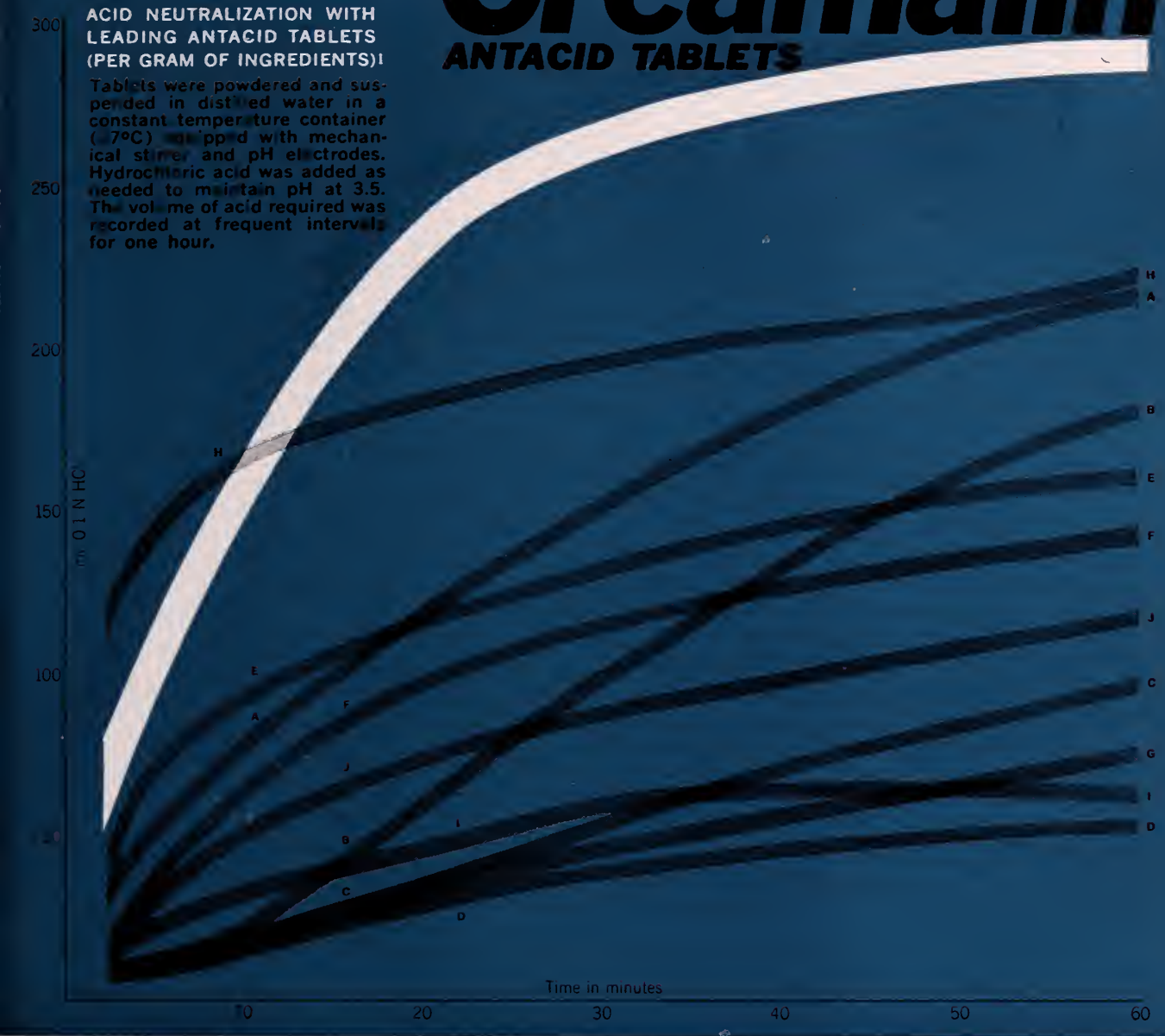
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How Supplied: Bottles of 50, 100, 200 and 1000.

1. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A. (Scient. Ed.)* 48:380, July, 1959. 2. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A. (Scient. Ed.)* 48:384, July, 1959.

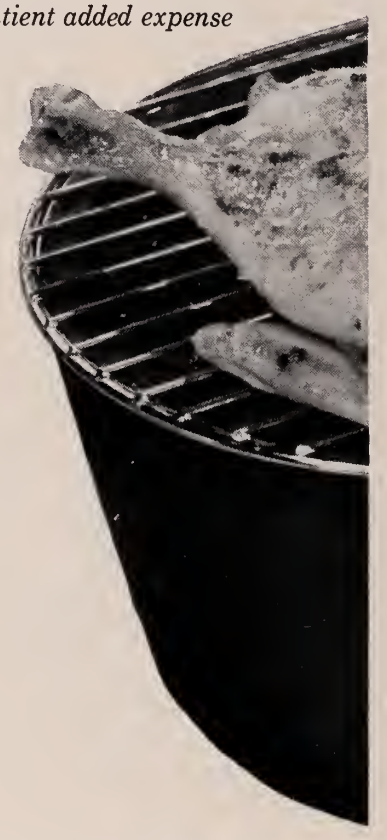
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FOR PEPTIC ULCER • GASTRITIS • GASTRIC HYPERACIDITY

Q. *When you want to reduce serum cholesterol and maintain it at a low level, is medication more realistic than dietary modifications?*

A. *Maintenance of lowered cholesterol concentration in the blood is a life-long problem. It is usually preferable, therefore, to try to obtain the desired results through simple dietary modification. This spares the patient added expense and permits him meals he will relish.*

The modification is based on a diet to maintain optimum weight plus a judicious substitution of the poly-unsaturated oils for the saturated fats. One very simple part of the change is to cook the selected foods with poly-unsaturated Wesson. In the prescribed diet, this switch in type of fat will help to lower blood serum cholesterol and help maintain it at low levels. The use of Wesson permits a diet planned around many favorite and popular foods. Thus the patient finds it a pleasant, easy matter to adhere to the prescribed course.



Where a vegetable (salad) oil is medically recommended for a cholesterol depressant regimen, Wesson is unsurpassed by any readily available brand.

Uniformity you can depend on. Wesson has a poly-unsaturated content better than 50% . Only the lightest cottonseed oils of highest iodine number are selected for Wesson. No significant variations are permitted in the 22 exacting specifications required before bottling.

Wesson satisfies the most exacting appetites. To be effective, a diet must be *eaten* by the patient. The majority of housewives prefer Wesson particularly by the criteria of odor, flavor (blandness) and lightness of color. (Substantiated by sales leadership for 59 years and reconfirmed by recent tests against the next leading brand with brand identification removed, among a national probability sample.)

Chicken, grilled with homemade Wesson barbecue sauce, is low in saturated fat—and delicious eating. It gives longer lasting satisfaction.



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Never hydrogenated—completely salt free

Each pint of Wesson contains 437-524 Int. Units of Vitamin E

make them measure up



Incremin® with iron Syrup

Lysine-Vitamins Lederle

help restore the normal blood picture—iron as ferric pyrophosphate to restore or maintain normal hemoglobin.

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upgrade low-grade protein—cereals and other low protein favorites of children, upgraded by l-Lysine, work with meat and other top protein to build stronger bodies.

tastes good! Each daily cherry-flavored teaspoonful dose (5 cc.) contains:

l-Lysine HCl	300 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine HCl (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Sorbitol	3.5 Gm.
Alcohol	0.75%

Bottles of 4 and 16 fl. oz.

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Butazolidin®

brand of phenylbutazone

in arthritis and allied disorders

proved by a decade of experience

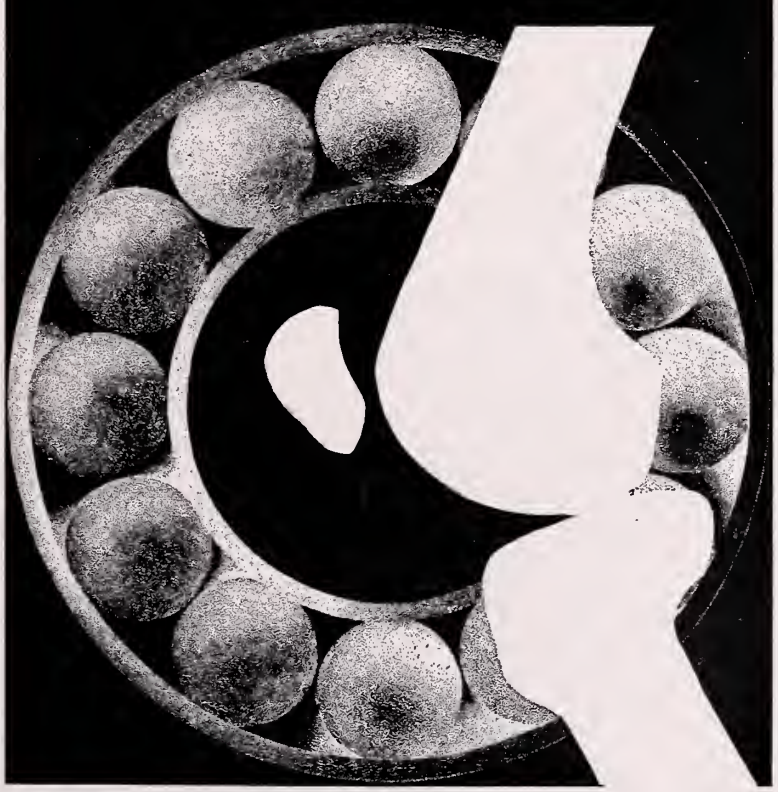
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Even when administered over months or years Butazolidin does not provoke tolerance nor produce signs of hormonal imbalance.

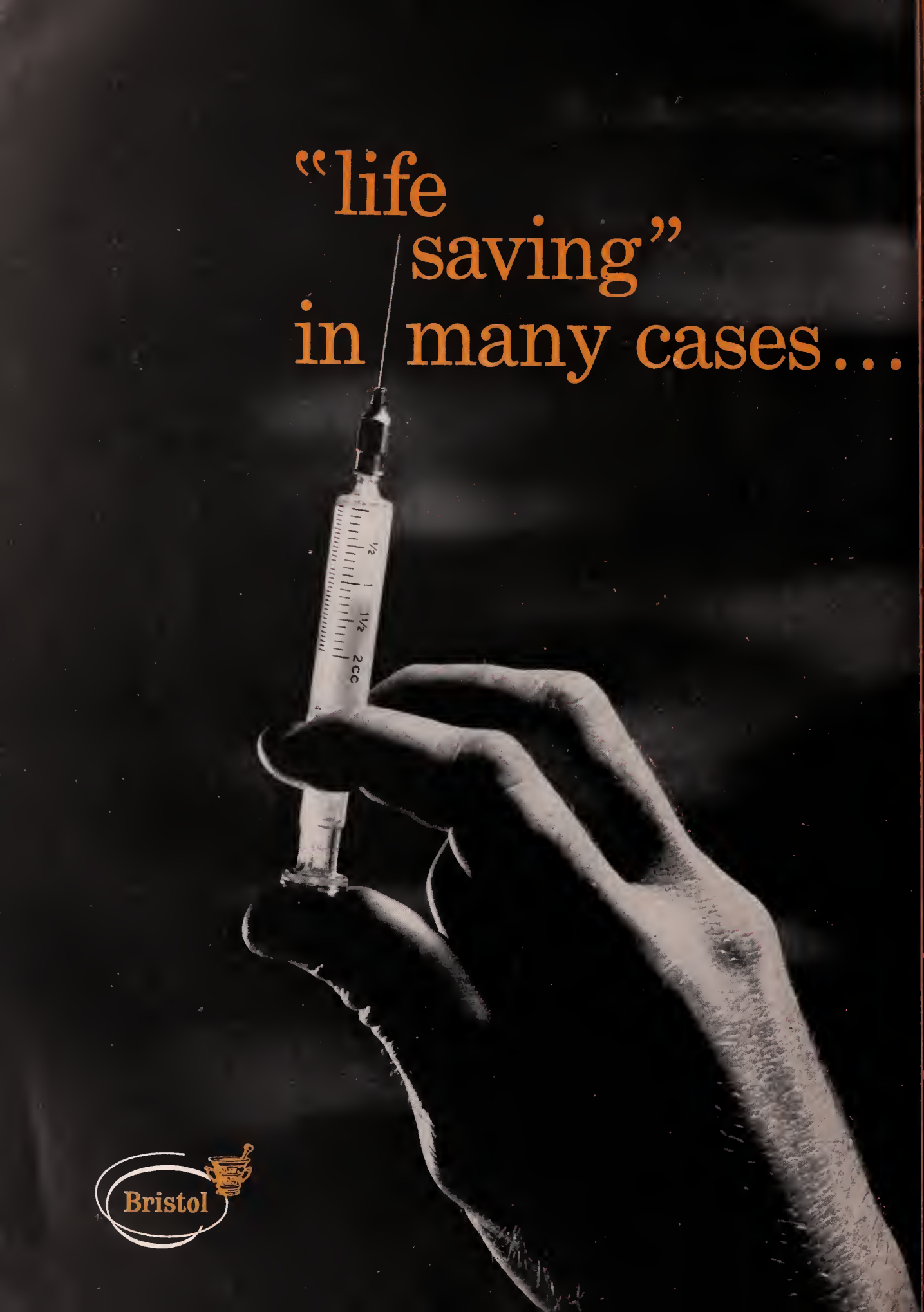
Butazolidin® brand of phenylbutazone: Red-coated tablets of 100 mg. Butazolidin® Alka: Capsules containing Butazolidin® 100 mg.; dried aluminum hydroxide gel 100 mg.; magnesium trisilicate 150 mg.; homatropine methylbromide 1.25 mg.

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Kanamycin Sulfate Injection

...a highly potent, bactericidal antibiotic for combating staph and gram negative infections

...well tolerated when used on a properly individualized dosage schedule which does not induce excessive blood levels

"In many instances its effect has been dramatic and life saving . . ."[1]

"Six of the patients who survived were considered to be terminally ill at the time kanamycin was started but showed dramatic improvement and eventual complete recovery."[2]

"...indeed, the results [with kanamycin] are the most remarkable ever achieved with otherwise fatal staphylococcal infections that we have ever seen."[3]

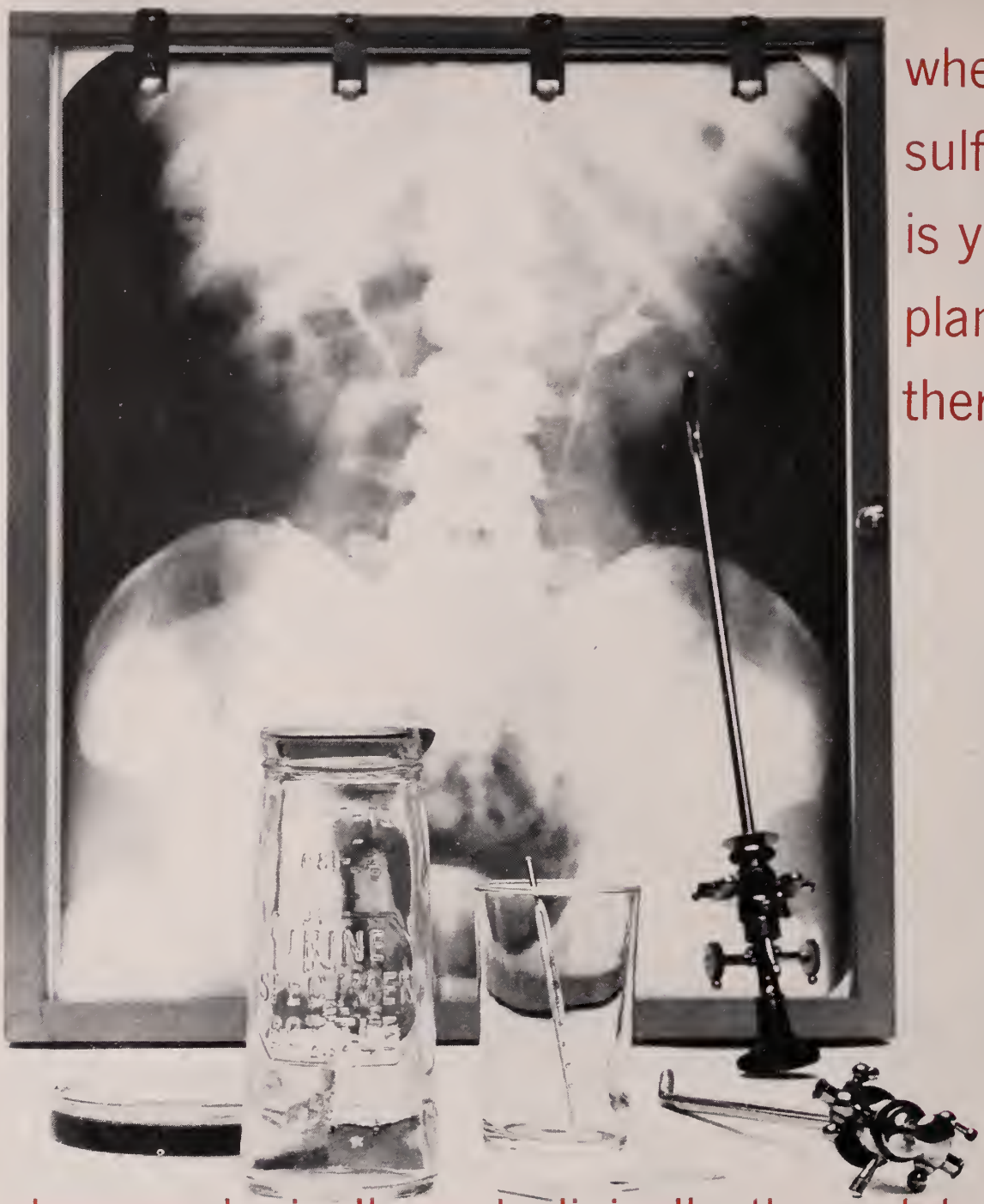
"There appears to be no doubt that kanamycin has been lifesaving in those instances in which organismal resistance precludes the use of other antimicrobials."[4]

Information on dosage, administration and precautions contained in package insert or available on request.

SUPPLY: KANTREX Injection, 0.5 Gm. kanamycin (as sulfate) in vial containing 2 ml. volume. KANTREX Injection, 1.0 Gm. kanamycin (as sulfate) in vial containing 3 ml. volume.

REFERENCES: 1. Yow, E. M.: Practitioner 182:759, 1959. 2. Yow, M. D., and Womack, G. K.: Ann. N. Y. Acad. Sci. 76:363, 1958. 3. Bunn, P. A., Baltch, A., and Krajnyak, O.: Ibid. 76:109, 1958. 4. Council on Drugs, J.A.M.A. 172:699, 1960.

BRISTOL LABORATORIES, SYRACUSE, NEW YORK



when sulfa is your plan of therapy...

pharmacologically and clinically the outstanding

Rapid peak attainment — for early control — KYNEX® Sulfamethoxypyridazine reaches peak plasma levels in 1 to 2 hours[1,2] . . . or approximately one-half the time of other once-a-day sulfas.[2] Uninterrupted control is then sustained over 24 hours with the single daily dose . . . through slow excretion without renal alteration.

High free levels — for dependable control — More efficient absorption delivers a higher percentage of sulfamethoxypyridazine — averaging 20 per cent greater at respective peaks than glucuronide-conversion sulfas.[2] Of the total circulating levels, 95 per cent remains in the fully active, unconjugated form even after 24 hours.[3]

Extremely low toxicity[4] . . . only 2.7 per cent incidence in recommended dosage — Typical of KYNEX relative safety, toxicity studies[5] in 223 patients showed **TOTAL** side effects (both subjective and objective) in only six cases, all temporary and rapidly reversed. Another evaluation[4] in 110 patients confirmed the near-absence of reactions when given at the recommended dosage. High solubility of both free and conjugated product[6] obviates renal complications. No crystalluria has been reported.

Successful against these organisms: streptococci, staphylococci, E. coli, A. aerogenes, paracolon bacillus, Gram-negative rods, pneumococci, diphtheroids, Gram-positive cocci and others.

1. Boger, W. P.; Strickland, C. S., and Gylfe, J. M.: Antibiotic Med. & Clin. Ther. 3:378, (Nov.) 1956. 2. Boger, W. P.: Antibiotics Annual 1958-1959. New York, Medical Encyclopedia, Inc., 1959, p. 48. 3. Sheth, U. K.; Kulkarni, B. S., and Kamath, P. G.: Antibiotic Med. & Clin. Ther. 5:604 (Oct.) 1958. 4. Vinnicombe, J.: Ibid. 5:474 (July) 1958. 5. Anderson, P. C., and Wissinger, H. A.: U. S. Armed Forces M. J. 10:1051 (Sept.) 1959. 6. Roepke, R. R.; Maren, T. H., and Mayer, E.: Ann. New York Acad. Sc. 60:457 (Oct.) 1957.

KYNEX is your drug of choice



once-a-day sulfa . . .

NOTE: Investigators note a tendency of some patients to misinterpret dosage instructions and take KYNEX on the familiar q.i.d. schedule. Since one KYNEX tablet is equivalent to eight to twelve tablets of other sulfas, even moderate overdosage may produce side effects. Thus, the single dose schedule must be stressed to the patient.

KYNEX Tablets, 0.5 Gm., bottles of 24 and 100. Dosage: Adults, 0.5 Gm. (1 tablet) daily, following an initial first day dose of 1 Gm. (2 tablets).

KYNEX Acetyl Pediatric Suspension, cherry-flavored, 250 mg. sulfamethoxypyridazine activity per teaspoonful (5 cc.). Bottles of 4 and 16 fl. oz. Recommended Dosage: Children under 80 lbs.: 1 teaspoonful (250 mg.) for each 20 lb. body weight, the first day, and ½ teaspoonful per 20 lb. per day thereafter. For children 80 lbs. and over: 4 teaspoonfuls (1.0 Gm.) initially and 2 teaspoonfuls daily thereafter. Give immediately after a meal.

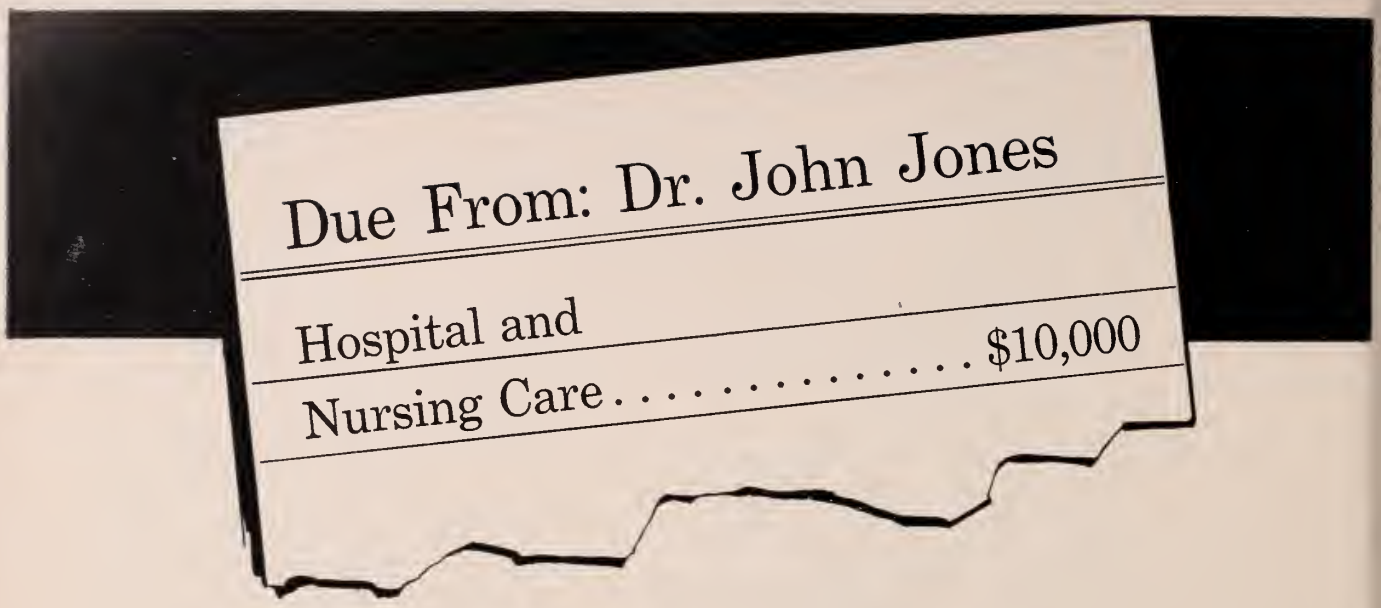
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Sulfamethoxypyridazine Lederle

NEW—for acute G.U. infection AZO-KYNEX® Phenylazodiaminopyridine HCl—Sulfamethoxypyridazine Tablets, contains 125 mg. KYNEX in the shell with 150 mg. phenylazodiaminopyridine HCl in the core. Dosage: 2 tablets q.i.d. the first day; 1 tablet q.i.d. thereafter.

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Doctor . . . What would paying a bill like this do to your personal finances?

As a doctor, you are well acquainted with today's extremely high hospital and nursing costs. Yet many physicians have done nothing to cushion the financial shock of serious illness or injury to themselves or their families.

PLAN 1. Major Hospital And Nursing

Provides coverage for you, and your wife to age 70, and dependent, unmarried children between the ages of 14 days and 23 years. Protectian up to $10,000 within 3 years of accident or sickness . . . the same sum for any sickness for which payment has been made that recurs after an interval of 12 months. The plan pays 100% af room, board and all necessary charges for hospital care and treatment . . . 75% of special nurse expense in the hospital. You have a choice of 3 deductible amounts to keep your premiums within the range you prefer. Unlike most such plans, premiums *do not* increase with your age.

PLAN 2. Professional Overhead Expense

If you should be disabled by accident or illness, this plan provides an income for you. Amount of income is based on your office overhead. You receive disability income for 12 months and if disability recurs after 90 days, income is resumed for another 12 months. Both plans are underwritten by American Casualty Company of Reading, Pa.

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To protect its members from crippling hospital expenses, The Medical Saciety of Virginia is sponsoring a low-cost group insurance program for physicians only. To best suit your individual needs, 2 basic types of protection are offered (see outline of plans at left).

HAVE YOUR NURSE PHONE US COLLECT

Find out why The Medical Society of Virginia has approved these plans as the best available protection for its members. Have your nurse phone collect for full information. There is no obligation and no salicitor will call. Already hundreds of Virginia doctors have enrolled. If you, too, have been interested in these plans, but lacked the time to seriously study them, please get in touch with us today. We will gladly supply additional infarmation or an enrollment application. *May we hear fram yau taday?*

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relieves both stiffness and pain with safety... sustained effect

In 100 consecutive patients with the low back syndrome, Kestler[1] reported that particularly gratifying was the ability of SOMA "to relax muscular spasm, relieve pain, and restore normal movement, thus speeding recovery in a large majority of the patients."

RESULTS WITH SOMA IN THE LOW BACK SYNDROME*



*Investigators' reports to the Medical Department, Wallace Laboratories. (Total of 278 cases)

NOTABLE SAFETY—extremely low toxicity; no known contraindications; side effects are rare; drowsiness may occur, usually at higher dosage

RAPID ACTION—starts to act quickly **SUSTAINED EFFECT**—relief lasts up to 6 hours

EASY TO USE—usual adult dosage is one 350 mg. tablet 3 times daily and at bedtime

SUPPLIED—as white, coated, 350 mg. tablets, bottles of 50; also available for pediatric use: 250 mg., orange capsules, bottles of 50

1. Kestler, O.: In The Pharmacology and Clinical Usefulness of Carisoprodol, Wayne State University Press, Detroit, 1959. 2. Berger, F. M.; Kletzkin, M.; Ludwig, B. J.; Margolin, S., and Powell, L. S.: J. Pharm. Exp. Ther. *127*:66 (Sept.) 1959. 3. Spears, C. E. and Phelps, W. M.: Arch. Pediat. *76*:287 (July) 1959. 4. Phelps, W. M.: Arch. Pediat. *76*:243 (June) 1959. 5. Friedman, A. P.; Frankel, K., and Fransway, R. L.: Papers presented at Scientific Meeting, New York State Society of Industrial Medicine, Inc., New York, Sept. 30, 1959. 6. Kuge, T.: Unpublished reports. 7. Ostrowski, J. P.: Orthopedics *2*:7 (Jan.) 1960.

Literature and samples on request

Also available on request: The Pharmacology and Clinical Usefulness of Carisoprodol, Wayne State University Press, Detroit, 1959. (185 pages)

SOMA™

(carisoprodol Wallace)

WALLACE LABORATORIES, New Brunswick, New Jersey

Preferably, antibiotic therapy should be based on pretreatment culture of the offending pathogen, but in bacterial pneumonia the problem may well be too pressing to permit the required delay of 24 to 48 hours. A differential diagnosis among bacterial pneumonias, based on such clinical grounds as speed of onset, sepsis and pain may guide the choice of antibiotic for initiation of therapy.

Should clinical judgment dictate that antibiotic therapy be started immediately, at the same time a sputum sample or a subglottic swab can be sent to the laboratory for culture and sensitivity studies. If the response to the first antimicrobial agent proves unsatisfactory, a reasonable basis for changing therapy will then be at hand.

Choosing the Antibiotic

Since therapy must be started at once for bacterial pneumonia, it is advisable to choose a broad-spectrum antibiotic that quickly produces high levels of active agent (e.g., tetracycline phosphate complex, TETREX). Such an antibiotic probably has the best chance of controlling the pathogen, whether it be gram-negative or gram-positive. And if the laboratory report shows that the invading organism is much less sensitive to tetracycline than to other agents, the patient can then be changed to an appropriate antibiotic. If the difference in sensitivity is slight, then the possibility of side effects, sensitization, and toxicity should be evaluated before changing therapy to another antibiotic.

The greatest number of bacterial pneumonias are caused by pneumococci, which respond very well to penicillin, tetracycline, and chloramphenicol. Also, these antibiotics are usually effective against the other gram-positive coccal pneumonias. But penicillin is ineffective against the viral pneumonias and the gram-negative *Hemophilus influenzae* and *Klebsiella pneumoniae*. Although *K. pneumoniae* causes only about 1 to 2 per cent of pneumonia cases on the average,[1] these are apt to be acute and fulminating (Friedländer's pneumonia), with a high mortality rate if not effectively treated. Since pneumococcal pneumonia may be difficult to distinguish clinically from Friedländer's, except by gram-stained sputum smear, it may be wiser to start treatment with an agent also effective against Klebsiella.

Penicillin, however, in addition to having a limited spectrum, also causes many minor and some serious sensitivity reactions. In a recent survey[2] it was found that penicillin produced severe skin reaction. But most important was the observation that anaphylactic shock, with a fatality rate of about 9 per cent, was the most frequent serious reaction. Such severe reactions are almost always associated with parenteral administration.

Tetracycline is also clinically effective in primary atypical pneumonia.[3]

The tetracyclines (e.g., TETREX) have the advantage of a broad range of antimicrobial activity and low toxicity. And in addition, the physician does not have to trouble himself or his patients with repeated blood studies when he prescribes TETREX. Minor reactions such as gastric upsets or mild skin rashes occur occasionally. The most serious side effects are staphylococcal and monilial overgrowth, but these are rare and can be adequately controlled.

No one would deny that appropriate antibiotic therapy has greatly reduced morbidity and saved many lives of patients with bacterial pneumonia. Nevertheless, general supportive measures in the care of patients remain important even today. Especially in the desperately ill patient, antibiotics are not considered as substitutes for the individual evaluation, clinical observation and judgment of the physician.

***Some Micro-organisms Susceptible*[a] *to Tetracycline* (TETREX)[b]**

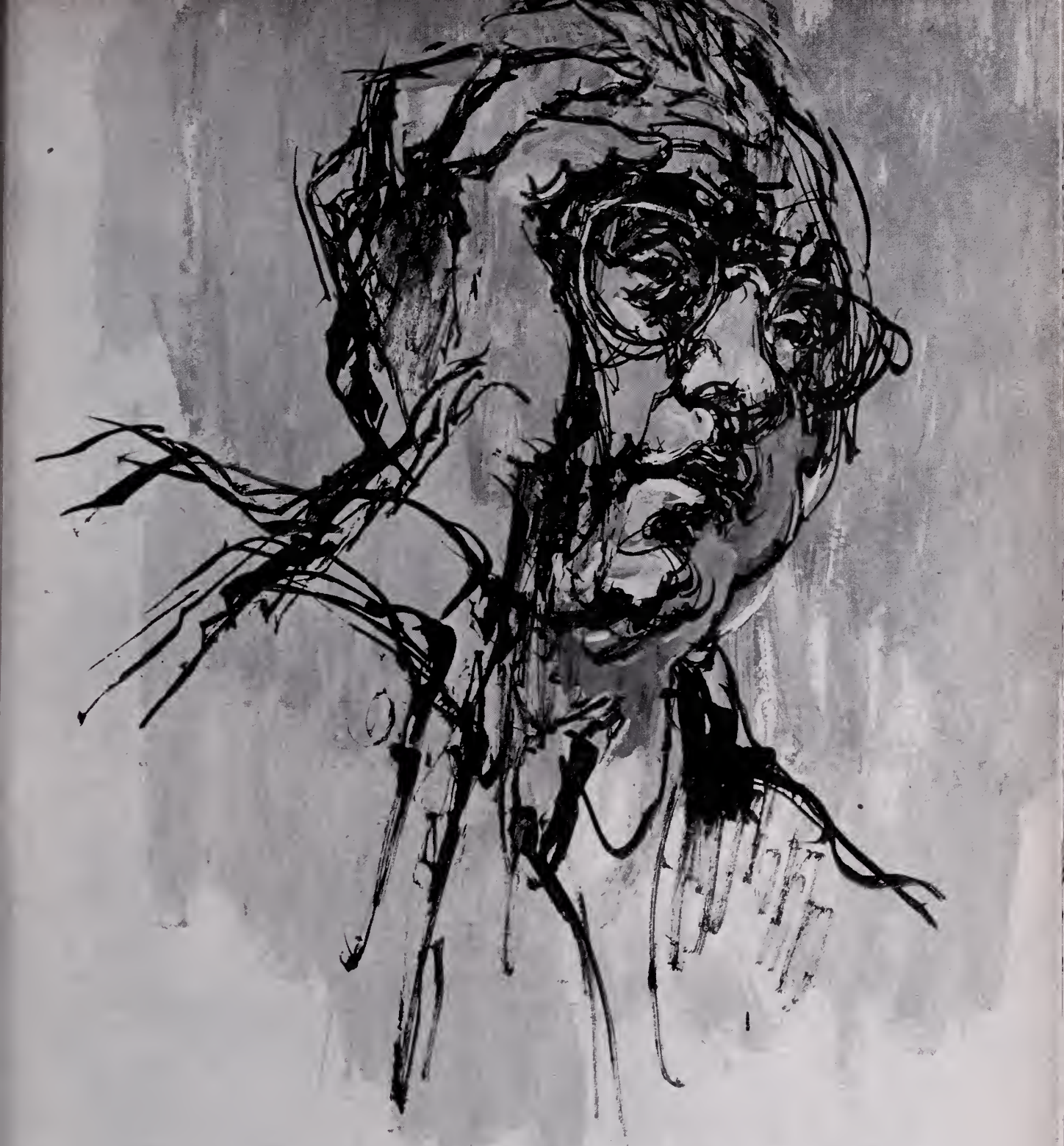
Streptococcus; Staphylococcus; Pneumococcus; Gonococcus; Meningococcus; *C. diphtheriae; B. anthracis; E. coli;* Proteus; *A. aerogenes; Ps. aeruginosa; K. pneumoniae;* Shigella; Brucella; *P. tularensis; H. influenzae; T. pallidum;* Rickettsiae; Viruses of psittacosis and ornithosis, lymphogranuloma inguinale, primary atypical pneumonia; *E. histolytica; D. granulomatosis.*

a Some strains are not susceptible.

b Table adapted from Goodman, L. S., and Gilman, A.: The Pharmaceutical Basis of Therapeutics. 2nd edition, New York, The Macmillan Co., 1956, pp. 1322-1323.

References: 1. Wood, W. E., Jr.: In: A Textbook of Medicine. Edited by Cecil, R. L., and Loeb, R. F., 9th edition, Philadelphia, W. B. Saunders Co., 1955, p. 145. 2. Welch, H.; Lewis, C. H.; Weinstein, H. I., and Boeckman, B. B.: Severe reactions to antibiotics. A nationwide survey. Antibiotic Med. & Clin. Ther. 4:800 (Dec.) 1957. 3. Keefer, C. S.: The choice of an anti-infective agent. In: Drugs of Choice, 1958-1959. Edited by Walter Modell, St. Louis, The C. V. Mosby Co., 1958, p. 135.

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When blood pressure must come down

When you see symptoms of hypertension such as dizziness, headache, and fainting your patient is a candidate for Serpasil-Apresoline. Even when single-drug therapy fails, Serpasil-Apresoline frequently can bring blood pressure down to near-normal levels, reduce rapid heart rate, allay anxiety.

SUPPLIED: Tablets #2 (standard-strength, scored), each containing 0.2 mg. Serpasil and 50 mg. Apresoline hydrochloride; Tablets #1 (half-strength, scored), each containing 0.1 mg. Serpasil and 25 mg. Apresoline hydrochloride.

SERPASIL®-APRESOLINE®

hydrochloride (reserpine and hydralazine hydrochloride CIBA)

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Dispel the clouds of sunset years

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Clinical trial samples available

Each Bi-layer tablet contains:

Pentylenetetrazol . . .	100 mg.
Niacin	50 mg.
Thiamine Hydrochloride	1 mg.
Ascorbic Acid	20 mg.

Dose: One or two tablets, three times daily.

LEPTINOL is a safe central nervous stimulant. LEPTINOL is highly effective in confused states of elderly patients. Incipient psychosis of senility, with its warning symptoms of loss of interest, egocentricity, hypochondriasis, insecurity and intolerance can frequently be ameliorated.

Even in the presence of degenerative organic pathology, LEPTINOL can markedly alleviate many of the mentally disturbing symptoms.

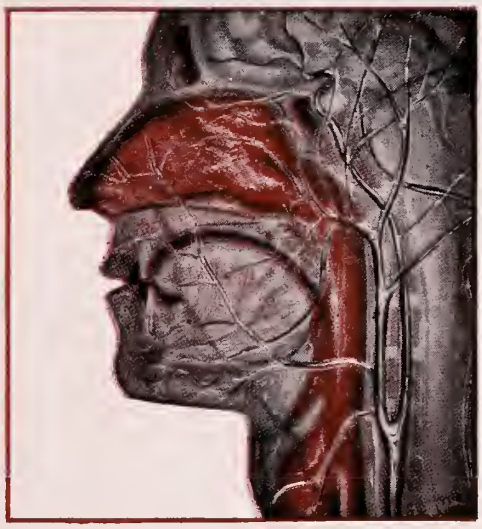
LEPTINOL has a very high index of therapeutic safety, with no liability of addiction or tolerance, virtually no contra-indications.

Primary action is a positive stimulation of the medulla, more pronounced in depressed states than in normal individuals. Higher brain centers are also stimulated, and to a lesser degree, the reflex activity of the cord.

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VALE
Pharmaceuticals since 1922

reaches all nasal and paranasal membranes *systemically*[1]



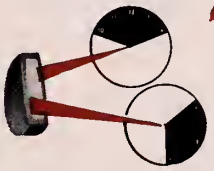
Pharmacologically balanced formula for prompt symptomatic relief

- in nasal and paranasal congestion
- in sinusitis and postnasal drip
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Triaminic*[2,3] *is safer and more effective than topical medication

- transported systemically to *all* respiratory membranes
- provides longer-lasting relief
- presents no problem of rebound congestion
- avoids "nose drop addiction"

Relief is prompt and prolonged because of this special timed-release action:



— the outer layer dissolves within minutes to produce 3 to 4 hours of relief

— the core disintegrates to give 3 to 4 *more* hours of relief

Each Triaminic timed-release Tablet provides:
Phenylpropanolamine HCl.....50 mg.
Pheniramine maleate.....25 mg.
Pyrilamine maleate.....25 mg.

Dosage: 1 tablet in the morning, midafternoon and at bedtime. In postnasal drip, 1 tablet at bedtime is usually sufficient.

Each timed-release Triaminic Juvelet® provides: ½ the formulation of the Triaminic Tablet.

Dosage: 1 Juvelet in the morning, midafternoon and at bedtime.

Each tsp. (5 ml.) of Triaminic Syrup provides: ¼ the formulation of the Triaminic Tablet.

Dosage (to be administered every 3 or 4 hours): *Adults* — 1 or 2 tsp.; *Children 6 to 12* — 1 tsp.; *Children 1 to 6* — ½ tsp.; *Children under 1* — ¼ tsp.

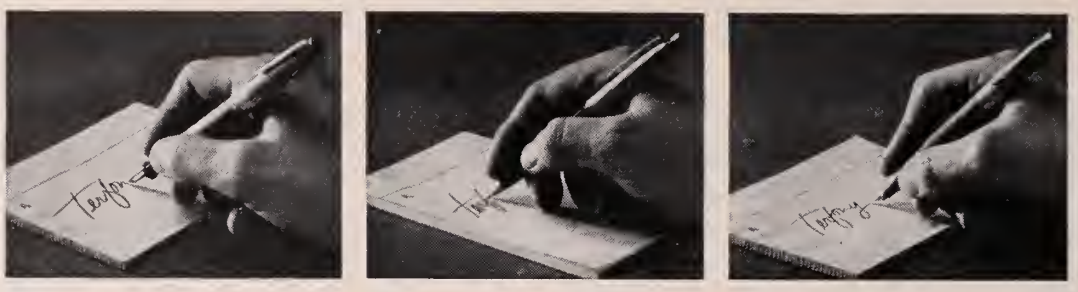
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2. Lhotka, F. M.: Illinois M. J.: *112*:259 (Dec.) 1957.
3. Farmer, D. F.: Clin. Med. *5*:1183 (Sept.) 1958.

the leading oral nasal decongestant...

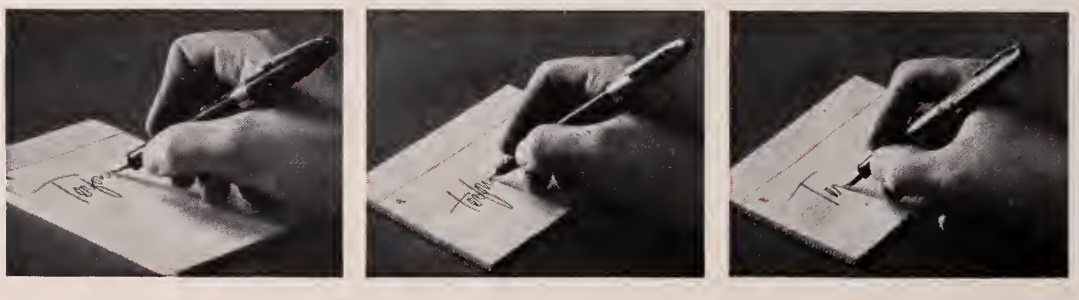
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timed-release tablets and juvelets
also non-alcoholic, fruit-flavored syrup

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more and more physicians are prescribing this triple sulfa



TERFONYL

Squibb Triple Sulfas (Trisulfapyrimidines)

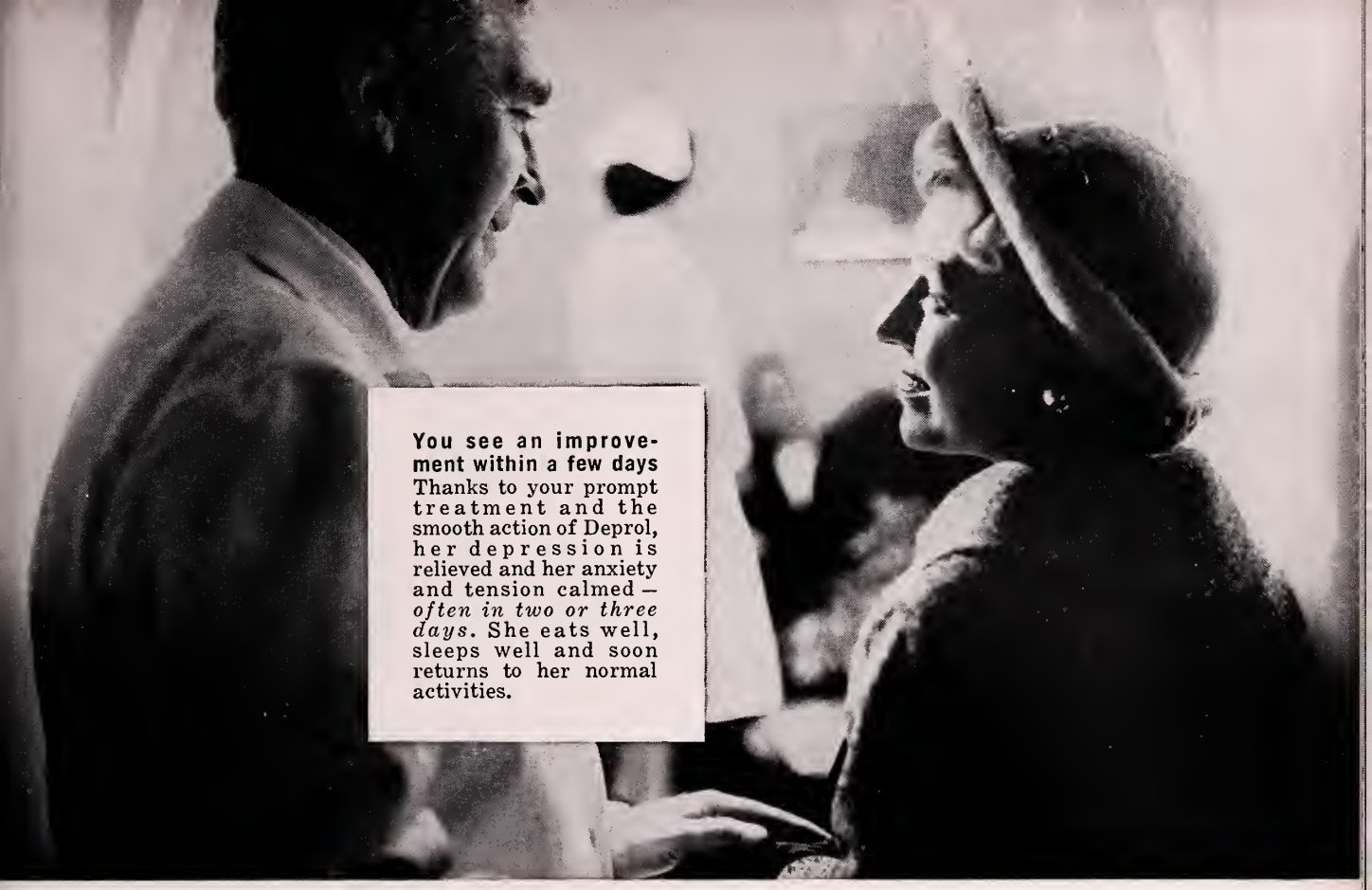
Clinical experience continues to prove that TERFONYL provides many special advantages fundamental to successful antibacterial therapy.

• specificity for a wide range of organisms • superinfection rarely encountered • soluble in urine through entire physiologic pH range • minimal disturbance of intestinal flora • excellent diffusion throughout tissues • readily crosses blood-brain barrier • sustained therapeutic blood levels • extremely low incidence of sensitization

SUPPLY: Tablets, 0.5 gm. • Suspension, raspberry flavored, 0.5 gm. per teaspoonful (5cc.).

SQUIBB *Squibb Quality—the Priceless Ingredient*

TERFONYL IS A SQUIBB TRADEMARK



You see an improvement within a few days Thanks to your prompt treatment and the smooth action of Deprol, her depression is relieved and her anxiety and tension calmed – *often in two or three days*. She eats well, sleeps well and soon returns to her normal activities.

Lifts depression... as it calms anxiety!

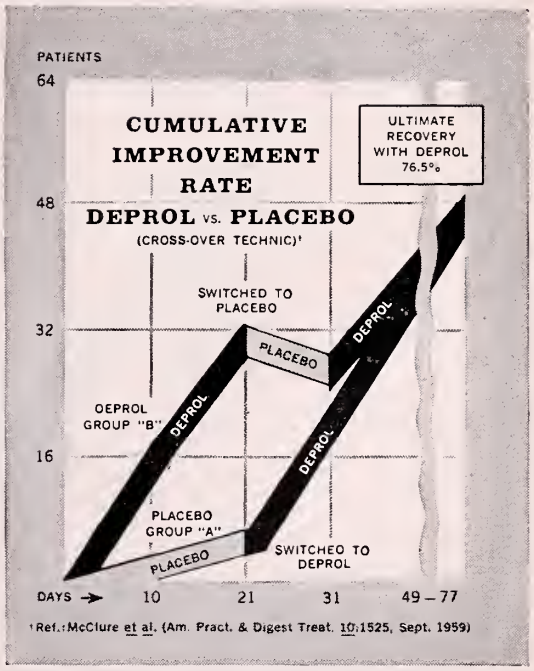
Smooth, balanced action lifts depression as it calms anxiety...rapidly and safely

Balances the mood – no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient – *they often aggravate anxiety and tension.* And although amphetamine-barbiturate combinations may counteract excessive stimulation – *they often deepen depression.*

In contrast to such "seesaw" effects, Deprol lifts depression as it calms anxiety – both at the same time.

Acts swiftly – the patient often feels better, sleeps better, within two or three days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly – often within two or three days.

Acts safely – no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function – frequently reported with other antidepressant drugs.



¹Ref.: McClure et al. (Am. Pract. & Digest Treat. 10:1525, Sept. 1959)

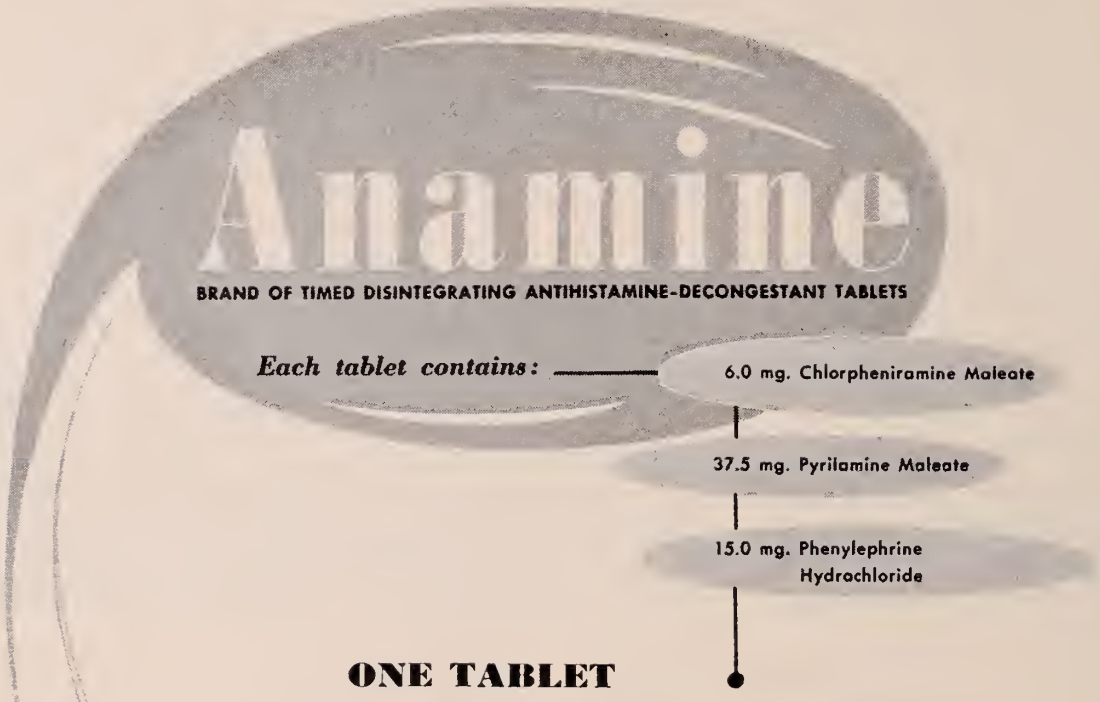
▲Deprol▲®

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be gradually increased up to 3 tablets q.i.d. **Composition:** 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate. **Supplied:** Bottles of 50 light-pink, scored tablets. Write for literature and samples.

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CD-1520

for control of nasal allergies
and seasonal hay fever



ONE TABLET

swiftly drys up nasal secretions;
yields maximum response 10 to 12 hours

One third of the dosage disintegrates immediately to control irritating nasal secretions. The remaining dosage releases gradually to provide a therapeutic effect up to 10 to 12 hours. Only minimum side effects and low pressor.

Two widely proven antihistamines. And, a potent decongestant. Now combined in Anamine Timed Disintegrating Tablets.

Prescribe

Anamine

Available in bottles
50 and 250 tablets;
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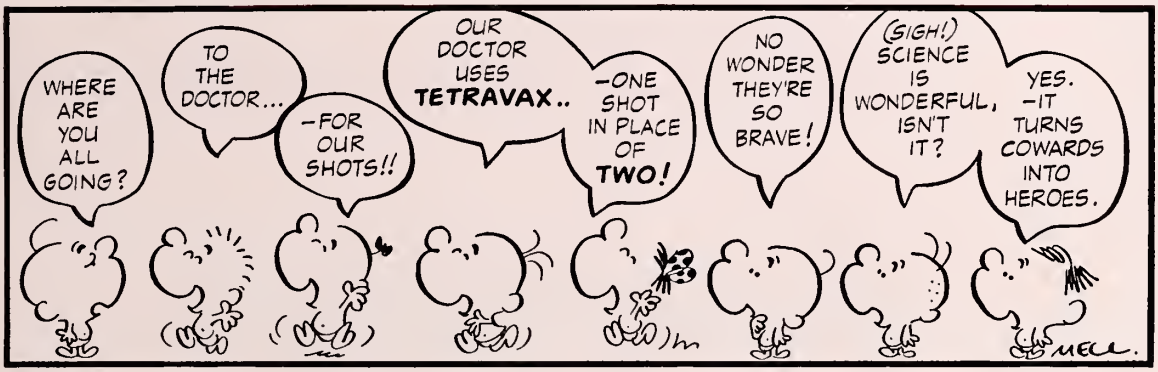
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now you can immunize against more *diseases...with* fewer *injections*

Dose: 1 cc.
Supplied: 9 cc. vials in *clear plastic* cartons. Package circular and material in vial can be examined without damaging carton. Expiration date is on vial for checking even if carton is discarded.

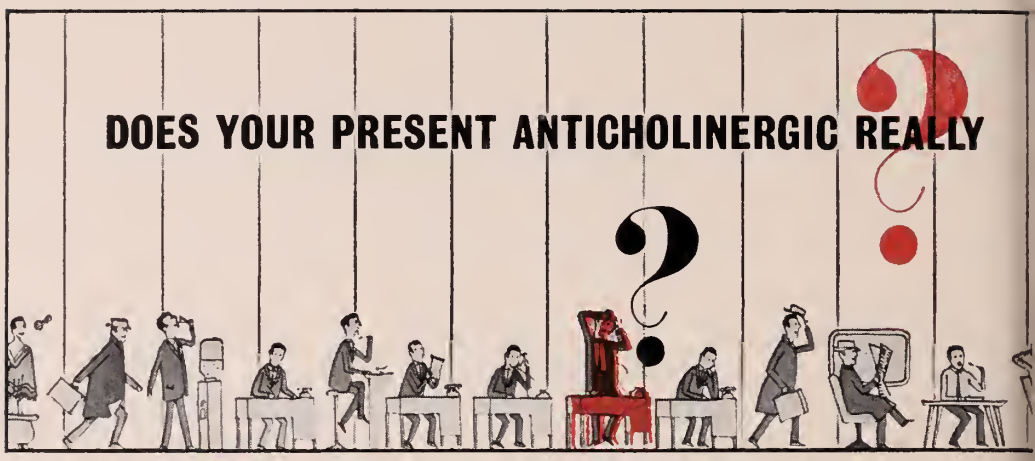


For additional information, write Professional Services, Merck Sharp & Dohme, West Point, Pa.

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DOES YOUR PRESENT ANTICHOLINERGIC REALLY



The test—you might say the acid test—of an anticholinergic is simple: will it protect your patient from hyperacidity around the clock, **even while he sleeps.** The weakness of t.i.d. or q.i.d. preparations is well recognized; but even some "b.i.d." encapsulations may be unreliable. McHardy, for instance, found a "widely variable duration of action, definitely less than that anticipated" in the "sustained," "delayed," and "gradual release" anticholinergics he studied.[1]

COMPARE THE DATA ON ENARAX... the new combination of an **inherently** long-acting anticholinergic (oxyphencyclimine) and Atarax, the non-secretory tranquilizer. Note the effectiveness of oxyphencyclimine:

OBSERVE THE OXYPHENCYCLIMINE REPORTS...

McHardy: "[Oxyphencyclimine] has proved to be an excellent sustained-action anticholinergic in our study of this agent over a period of eighteen months."[1]

Kemp: "...for the majority of patients, one tablet every 12 hours provided adequate control. This characteristic long action...may constitute an advantage of this drug as compared to coated 'long-acting' preparations of other compounds."[3]

Add Atarax to this 12-hour anticholinergic. The resulting combination—ENARAX—now gives relief from emotional stress, in addition to a reduction of spasm and acid. Atarax does not stimulate gastric secretion. No serious adverse clinical reaction has ever been documented with Atarax.

LOOK AT THE RESULTS WITH ENARAX[4,5]:

Does the medication you now prescribe assure you of all these benefits? If not, why not put your next patient with peptic ulcer or G.I. dysfunction on therapy that **does.**

ENARAX®



(oxyphencyclimine plus ATARAX®)

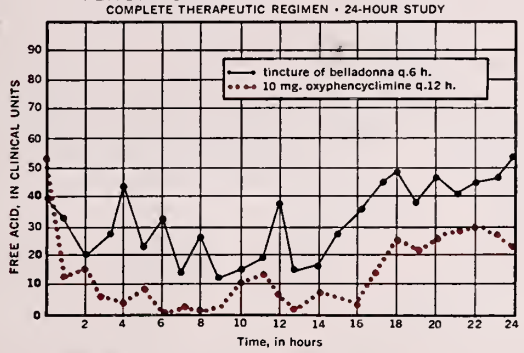
A SENTRY FOR THE G.I. TRACT

PROVIDE CONTINUOUS CONTROL OF ACID SECRETION?



"Prolonged periods of achlorhydria" after 10 mg. oxyphencyclimine q. 12 h.[2]

MEAN GRAPH OF GASTRIC ACIDITY IN 4 PATIENTS RECEIVING COMPLETE THERAPEUTIC REGIMEN • 24-HOUR STUDY



Clinical Diagnosis: Peptic Ulcer—Gastritis—Gastroenteritis—Colitis—Functional Bowel Syndrome—Duodenitis—Hiatus Hernia (symptomatic)—Irritable Bowel Syndrome—Pylorospasm—Cardiospasm—Biliary Tract Dysfunctions—and Dysmenorrhea.

Clinical Results: Effective in over 92% of cases.

As for Safety: "Side reactions were uncommon, usually no more than dryness of the mouth. . . ."[4]

Each ENARAX tablet contains:

Oxyphencyclimine HCl ..... 10 mg.
Hydroxyzine (ATARAX®) ..... 25 mg.

Dosage: One-half to one tablet twice daily—preferably in the morning and before retiring. The maintenance dose should be adjusted according to therapeutic response. Use with caution in patients with prostatic hypertrophy and with ophthalmological supervision only in glaucoma.

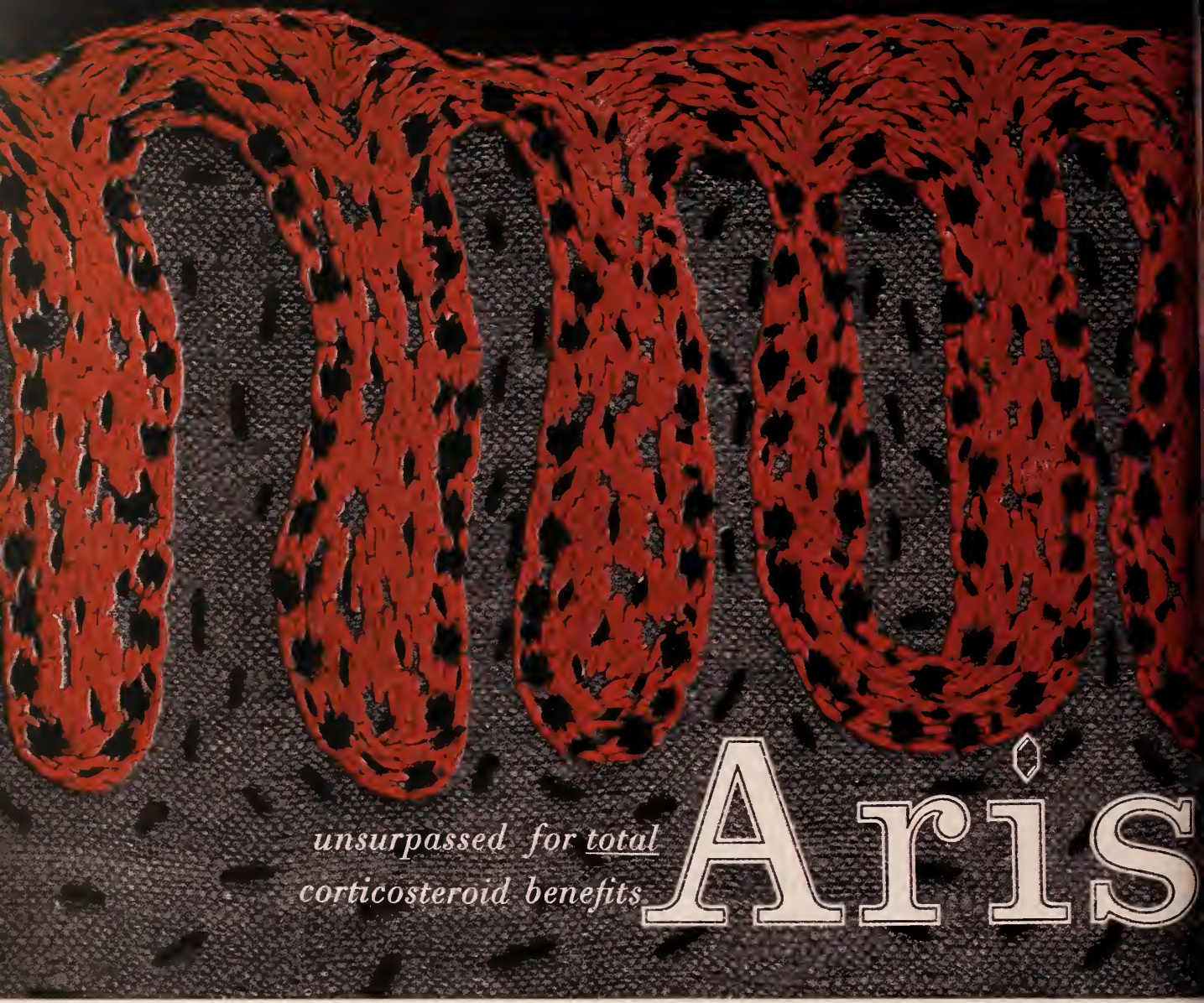
Supplied: In bottles of 60 black-and-white scored tablets.

References: 1. McHardy, G., et al.: J. Louisiana M. Soc. 111:290 (Aug.) 1959. 2. Steigmann, F.: Study conducted at Cook County Hospital, Chicago, Illinois, in press. 3. Kemp, J. A.: Antibiotic Med. & Clin. Therapy 6:534 (Sept.) 1959. 4. Leming, B. H., Jr.: Clin. Med. 6:423 (Mar.) 1959. 5. Data in Roerig Medical Department files.

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Science for the World's Well-Being™

in allergic and inflammatory skin disorders (including psoriasis)



unsurpassed for total corticosteroid benefits

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Substantiated by published reports of leading clinicians

- **effective control** of allergic and inflammatory symptoms[1-3,7,8,12-15,17,18]



- **minimal disturbance** of the patient's chemical and psychic balance[1,4-18]



At the recommended antiallergic and anti-inflammatory dosage levels, ARISTOCORT means:

- **freedom from salt and water retention**
- **virtual freedom from potassium depletion**
- **negligible calcium depletion**
- **euphoria and depression rare**
- **no voracious appetite — no excessive weight gain**
- **low incidence of peptic ulcer**
- **low incidence of osteoporosis with compression fracture**

Precautions: With ARISTOCORT all traditional precautions to corticosteroid therapy should be observed. Dosage should always be carefully adjusted to the smallest amount which will suppress symptoms.

After patients have been on steroids for prolonged periods, discontinuance must be carried out gradually over a period of as much as several weeks.

Supplied: 1 mg. scored tablets (yellow); 2 mg. scored tablets (pink); 4 mg. scored tablets (white); 16 mg. scored tablets (white).

Diacetate Parenteral (for intra-articular and intrasynovial injection). Vials of 5 cc. (25 mg./cc.).

References: 1. Feinberg, S. M.; Feinberg, A. R., and Fisherman, E. W.: *J.A.M.A.* 167:58 (May 3) 1958. 2. Epstein, J. I., and Sherwood, H.: *Conn. Med.* 22:822 (Dec.) 1958. 3. Friedlaender, S., and Friedlaender, A. S.: *Antibiotic Med. & Clin. Ther.* 5:315 (May) 1958. 4. Segal, M. S., and Duvenci, J.: *Bull. Tufts N.E. Medical Center* 4:71 (April-June) 1958. 5. Segal, M. S.: Report to the A.M.A. Council on Drugs, *J.A.M.A.* 169:1063 (March 7) 1958. 6. Hartung, E. F.: *J. Florida Acad. Gen. Practice* 8:18, 1957. 7. Rein, C. R.; Fleischwager, R., and Rosenthal, A. L.: *J.A.M.A.* 165: 1821 (Dec. 7) 1957. 8. McGavack, T. H.: *Clin. Med.* (June) 1959. 9. Freyberg, R. H.; Berntsen, C. A., and Hellman, L.: *Arthritis & Rheumatism* 1:215 (June) 1958. 10. Hartung, E. F.: *J.A.M.A.* 167:973 (June 21) 1958. 11. Zuckner, J.; Ramsey, R. H.; Caciolo, C., and Gantner, G. E.: *Ann. Rheumat. Dis.* 17:398 (Dec.) 1958. 12. Appel, B.; Tye, M. J., and Leibsohn, E.: *Antibiotic Med. & Clin. Ther.* 5:716 (Dec.) 1958. 13. Kalz, F.: *Canad. M.A.J.* 79:400 (Sept.) 1958. 14. Mullins, J. F., and Wilson, C. J.: *Texas J. Med.* 54:648 (Sept.) 1958. 15. Shelley, W. B.; Harun, J. S., and Pillsbury, D. M.: *J.A.M.A.* 167:959 (June 21) 1958. 16. DuBois, E. L.: *J.A.M.A.* 167:1590 (July 26) 1958. 17. McGavack, T. H.; Kao, K. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: *Am. J. M. Sc.* 236:720 (Dec.) 1958. 18. Council on Drugs: *J.A.M.A.* 169:257 (January) 1959.

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Decongestant / Antihistamine

THE POTENTIATED DECONGESTANT



provides symptomatic relief of nasal congestion and rhinorrhea of allergic or infectious origin Many patients whose symptoms are inadequately controlled by decongestants or antihistamines alone respond promptly and favorably to 'ACTIFED'.

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'Actidil'® brand Triprolidine Hydrochloride	2.5 mg.	1.25 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride	60 mg.	30 mg.

safe and effective for patients of all ages suffering from respiratory tract congestion

DOSAGE

	TABLETS	SYRUP (5 cc. tsp.)	
Adults and older children	1	2	three times daily
Children 4 months to 6 years of age	½	1	
Infants through 3 months	–	½	

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York



in infectious disease[17,22,30,38]
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in malabsorption syndrome[1,2,6,27]
in degenerative disease[6,7,19,20,40]
in cardiac disease[23,28,29,38,41]
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in peptic ulcer[8,21,36]
in neuroses & psychiatric disorders[25,26]
in diabetes mellitus[31,32,33,38]
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Squibb Vitamin-Minerals for Therapy

11 vitamins, 8 minerals
clinically-formulated and potency protected to provide
enough nutritional support
to do some good

with vitamins only
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1-41 a list of the above references will be supplied on request

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"THERAGRAN" IS A SQUIBB TRADEMARK

Squibb Quality—the Priceless Ingredient

for Allergic Manifestations

TRISTAMINE

TRISTAMINE is a unique combination of three antihistaminic agents, designed to afford high-level antihistaminic activity with a minimum of undesirable side-effects. The enhanced effectiveness achieved by the combination affords welcome relief from the discomfort of hay fever, seasonal and non-seasonal rhinitis, allergic dermatitis, urticaria and other conditions for which the contained antihistamines are clinically useful, while sedation and other side-effects commonly encountered with antihistamine therapy are minimized by the use of lower doses of the individual drugs.



Tristamine is supplied in two convenient dosage forms—Tristamine Sustained Release Capsules, affording relief for periods up to ten hours, and Tristamine Elixir, a sugar free sorbitol type 'syrup' that will appeal to children and adults who prefer liquid medication.

CAUTION:

Federal law prohibits dispensing without prescription.

PACKAGING:
Sustained Release Capsules, 60 mg., Bottles of 30, 100 and 1000.
Liquid, 10 mg./5 cc., Bottles of one pint and one gallon.

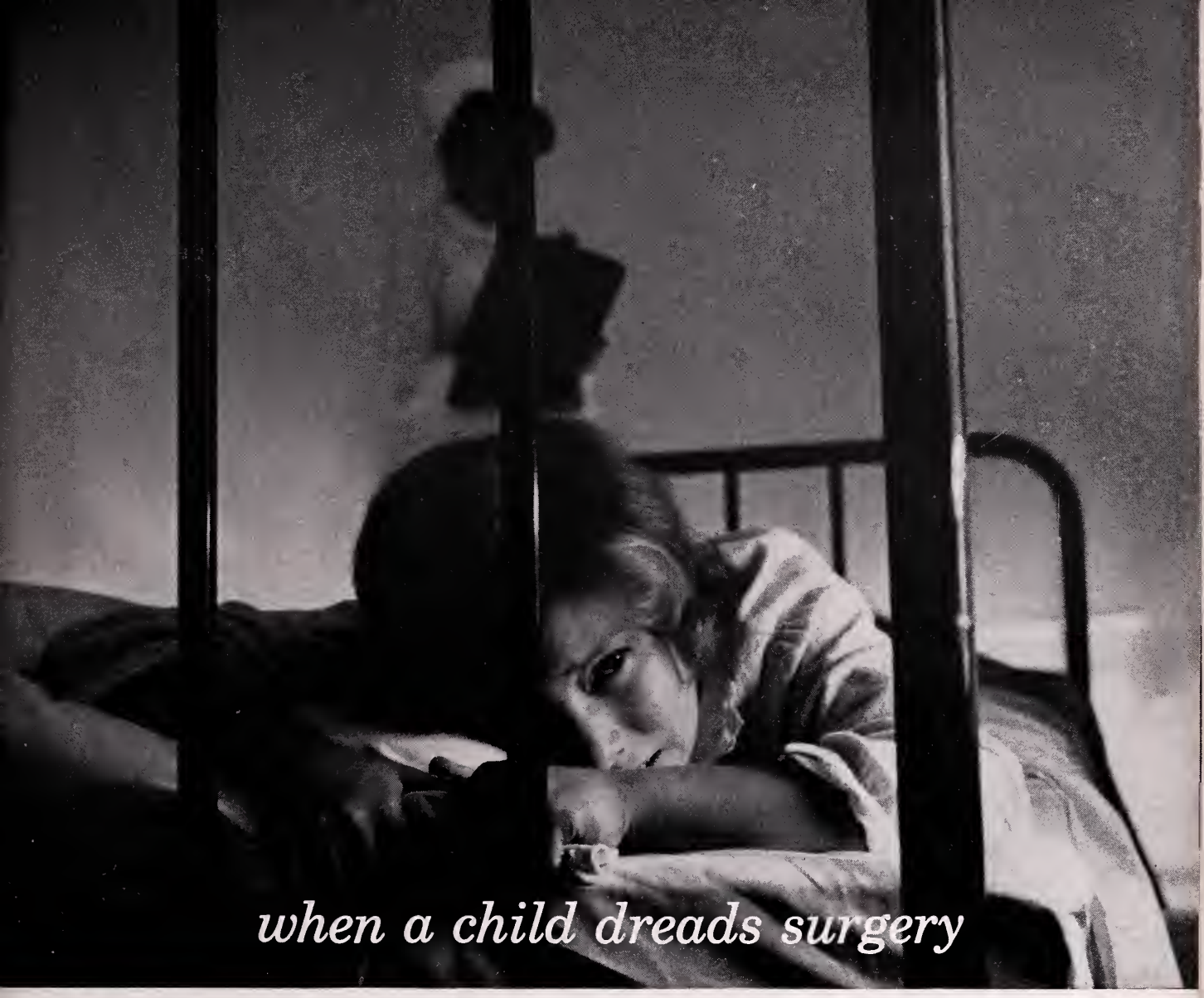
Contained Antihistamine	Dosage Range	Median Dose	Amount in 20.0 mg. of Tristamine	Percentage of Individual Median Dose
Phenyltoloxamine Citrate	25 mg.	25 mg.	6.25 mg.	25.0%
Pyrilamine Maleate	25-50 mg.	37.5 mg.	12.50 mg.	33.3%
Chlorpheniramine Maleate	2-4 mg.	3 mg.	1.25 mg.	41.7%
Percentage of Median Combined Dose of the three contained antihistamines in 20.0 mg. Tristamine				100.0%

DOSAGE:

Tristamine Capsules 60 Mg. (Sustained Release) Adults, One capsule every twelve hours, morning and night or at breakfast and supper. In unusually resistant cases it may be desirable to give one capsule every eight hours.

Tristamine Liquid (10 mg./5cc.)
Adults, two teaspoonfuls four times daily; **Children 12 to 16,** one to two teaspoonfuls three to 4 times daily; **Children 6 to 12,** One teaspoonful; **Children under six,** one-fourth to one-half teaspoonful.

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hydroxyzine pamoate

brings reassurance

VISTARIL has been found to be a remarkably effective aid to preanesthetic medication. Its "mild but definite tranquilizing action" quickly calms anxious, fearful children.

Steiner, L., Webb, C., and Adriani, J.: The Preoperative Sedation of Children, Presented before the Southern Society of Anesthesiologists, Annual Meeting, April 23-25, 1959, Birmingham, Alabama.

Oral Suspension—25 mg. per 5 cc. teaspoonful. *Capsules*—25, 50 and 100 mg. *Parenteral Solution* (as the HCl)—25 mg. per cc., 10 cc. vials and 2 cc. Steraject® Cartridges; 50 mg. per cc., 2 cc. ampules.

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after milk and rest, why Donnalate?

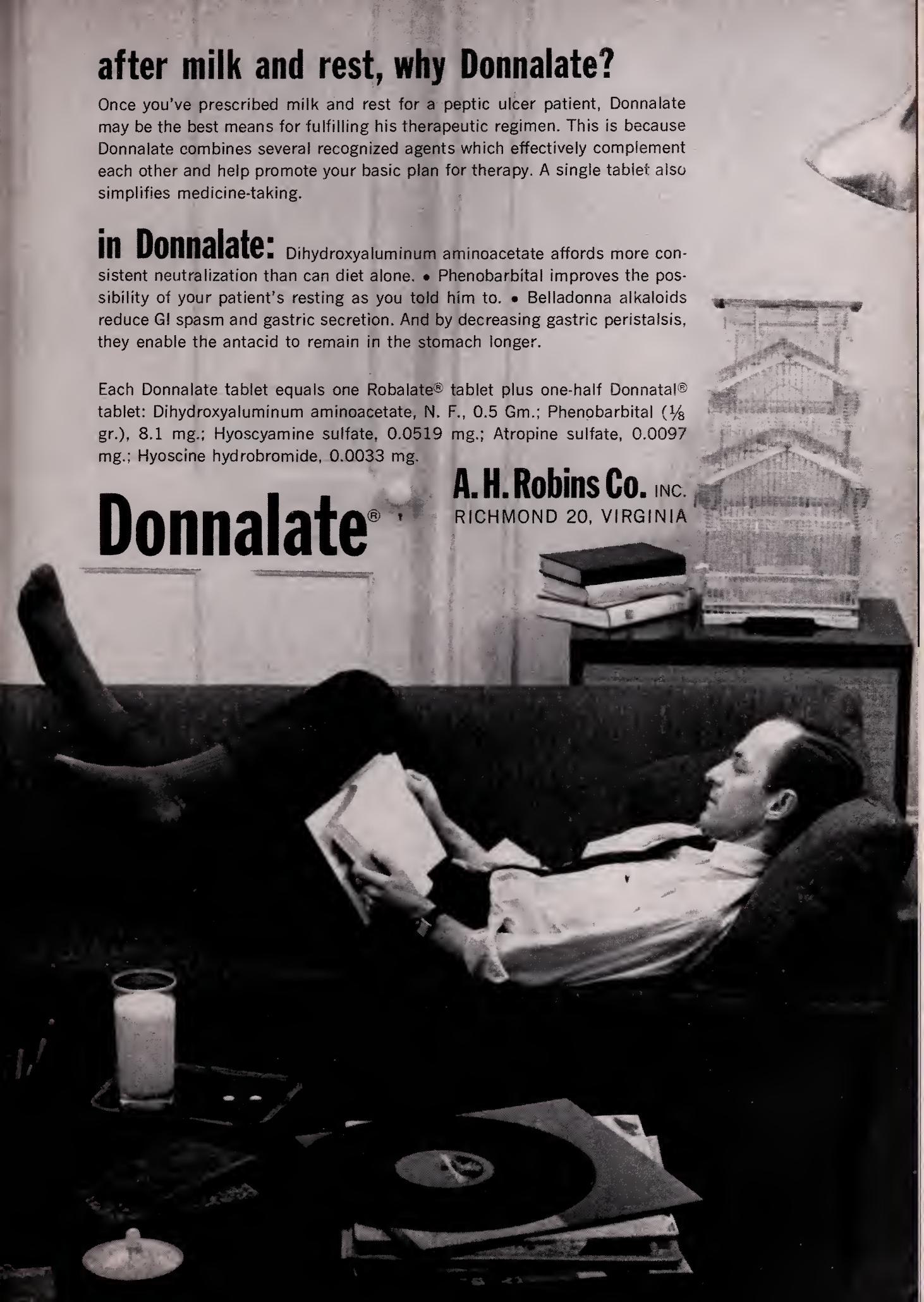
Once you've prescribed milk and rest for a peptic ulcer patient, Donnalate may be the best means for fulfilling his therapeutic regimen. This is because Donnalate combines several recognized agents which effectively complement each other and help promote your basic plan for therapy. A single tablet also simplifies medicine-taking.

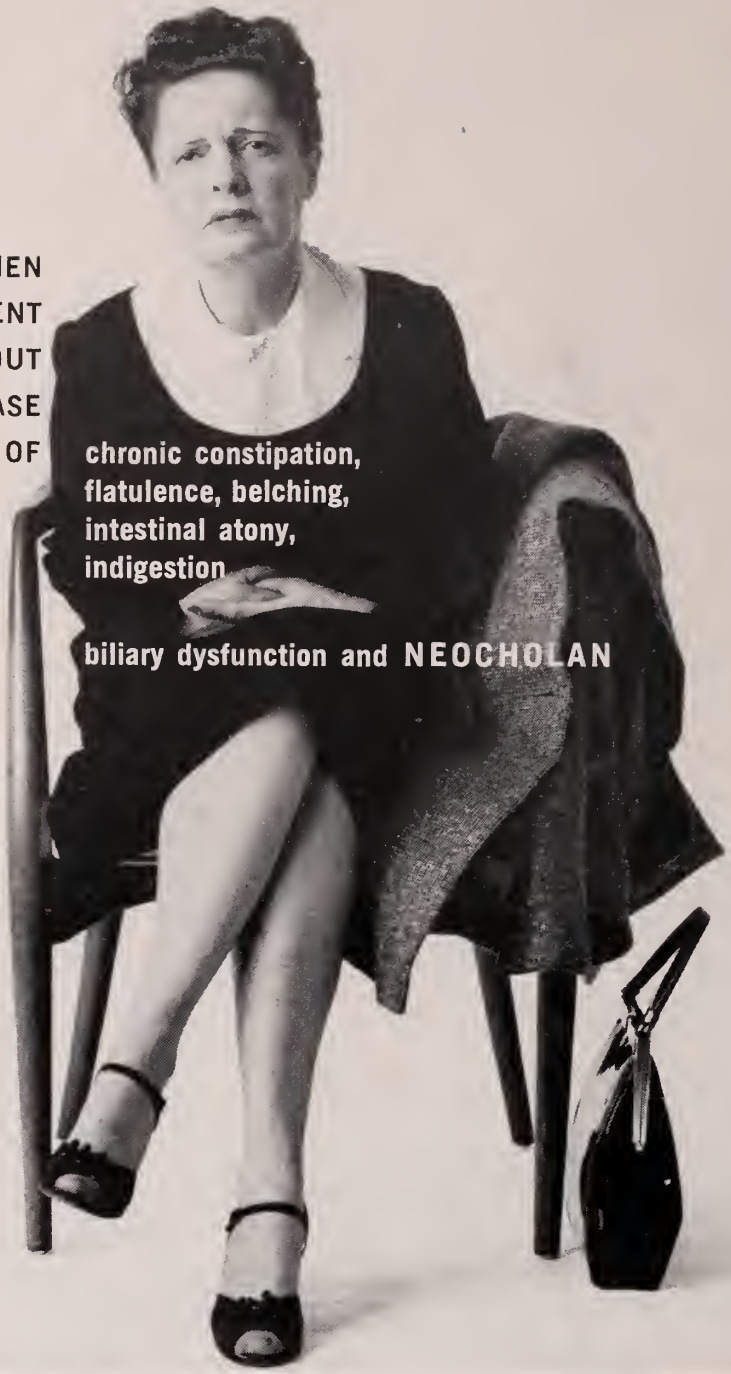
in Donnalate: Dihydroxyaluminum aminoacetate affords more consistent neutralization than can diet alone. • Phenobarbital improves the possibility of your patient's resting as you told him to. • Belladonna alkaloids reduce GI spasm and gastric secretion. And by decreasing gastric peristalsis, they enable the antacid to remain in the stomach longer.

Each Donnalate tablet equals one Robalate® tablet plus one-half Donnatal® tablet: Dihydroxyaluminum aminoacetate, N. F., 0.5 Gm.; Phenobarbital (1/8 gr.), 8.1 mg.; Hyoscyamine sulfate, 0.0519 mg.; Atropine sulfate, 0.0097 mg.; Hyoscine hydrobromide, 0.0033 mg.

Donnalate®

A. H. Robins Co. INC.
RICHMOND 20, VIRGINIA





WHEN
THE PATIENT
WITHOUT
ORGANIC DISEASE
COMPLAINS OF chronic constipation, flatulence, belching, intestinal atony, indigestion

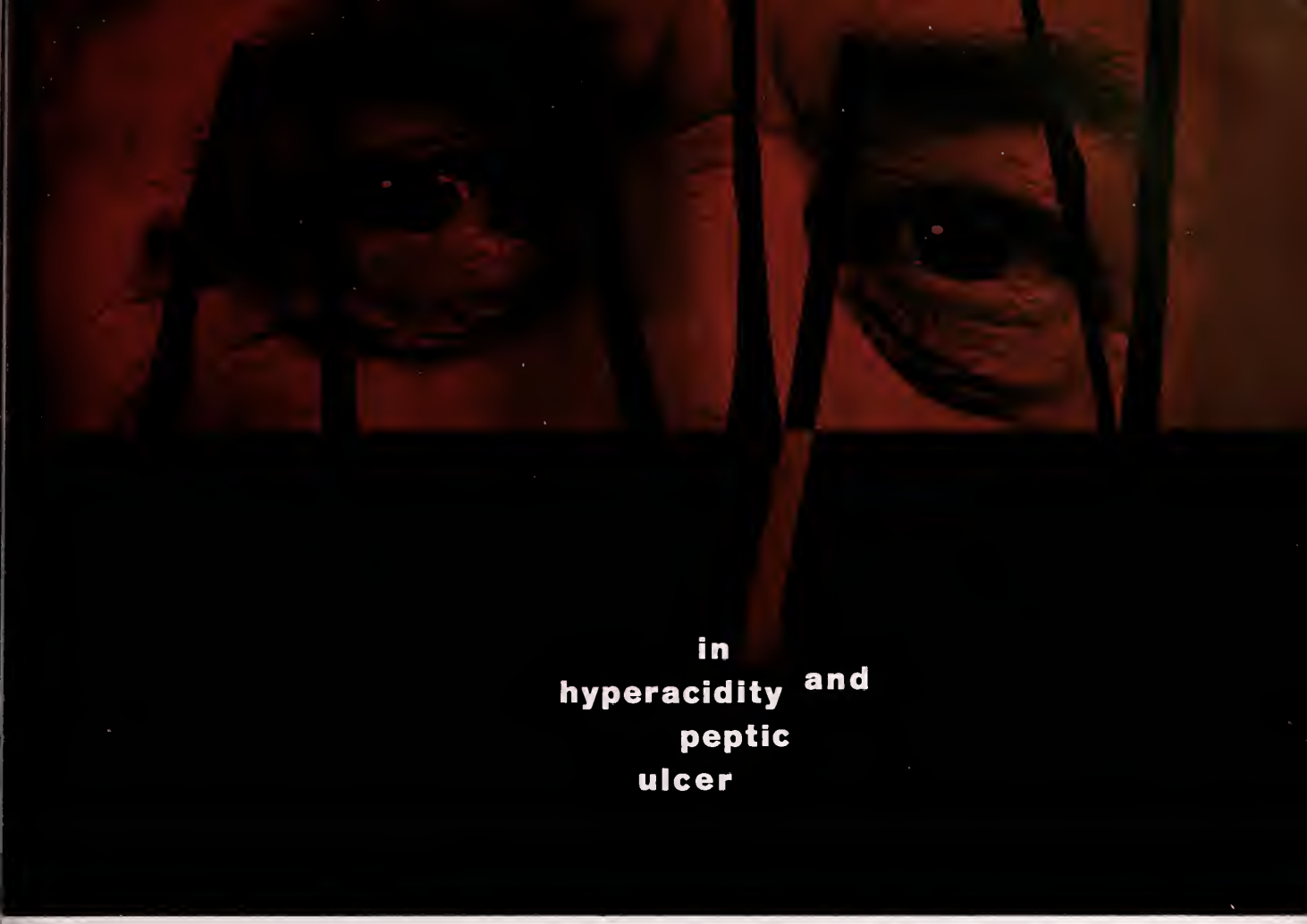
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NEOCHOLAN®

Your patient will often respond promptly to Neocholan therapy. It greatly increases the flow of thin, nonviscid bile and corrects biliary stasis by flushing the biliary system. It also relaxes intestinal spasm, resulting in an unimpeded flow of bile and pancreatic juice into the small intestine. Neocholan helps to promote proper digestion and absorption of nutrients. It also encourages normal peristalsis by restoring intestinal tone.

Each tablet provides: Dehydrocholic Acid Compound, P-M Co. 265 mg. (Dehydrocholic Acid, 250 mg.); Homatropine methylbromide 1.2 mg.; Phenobarbital 8.0 mg. Supplied in bottles of 100 tablets.

PITMAN-MOORE COMPANY
DIVISION OF ALLIED LABORATORIES, INC.
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in hyperacidity and peptic ulcer

as reactive in tablet form . . .

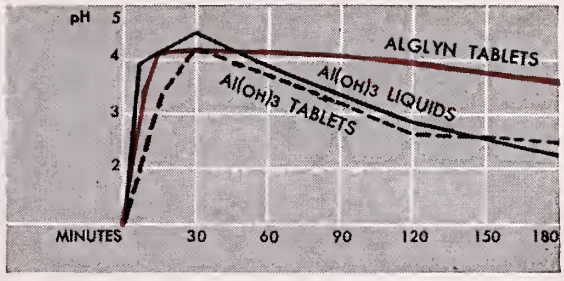
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Dihydroxy aluminum aminoacetate

The superiority of Alglyn (dihydroxy aluminum aminoacetate) as an antacid over ordinary aluminum preparations is quite pronounced. Not only do Alglyn Tablets act as rapidly as aluminum hydroxide gels and magmas, but they maintain a much more effective pH for a longer time (see chart).

Furthermore, Alglyn Tablets are decidedly superior when antacid-belladonna therapy is indicated. Ordinary aluminum preparations may actually *ad*sorb as much as 80% of the spasmolytic drug, as compared to only 7% for Alglyn Tablets. In addition, Alglyn contains no sodium and less aluminum.

Supplied in bottles of 100 0.5 Gm. tablets. Also as Belglyn® (with belladonna), and as Malglyn® (with belladonna and phenobarbital). Literature available upon request.



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A.P.C. WITH DEMEROL® (30 mg.)

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new oral prothrombin depressant

control at every stage of anticoagulant therapy **rapidity** of induction and recovery time **predictability** of initial and maintenance dosages **stability** of therapeutic prothrombin levels during maintenance therapy **reversibility** of anticoagulant effect with vitamin K_1 preparations... rapid return to therapeutic levels on remedication

Well tolerated and relatively nontoxic no nausea and vomiting, proteinuria, agranulocytosis or leukopenia yet observed —chromaturia infrequent and transient.

Single daily dose convenience

Packaging—MIRADON Tablets, 50 mg., bottle of 100.

For complete information on indications, dosage, precautions, and contraindications consult the Schering Statement of Directions.

S-435

ILOSONE® WORKS in STAPH. INFECTIONS





"In our hands it has been particularly helpful in the treatment of staphylococcic disease."[1]

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1. Smith, I. M., and Soderstrom, W. H.: J. A. M. A., *170*:184 (May 9), 1959.

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Guest Editorial....

Watch Out!

IT IS QUITE POSSIBLE the powers that be in Washington have more than one reason for complaining about the prices of drugs. Senator Estes Kefauver's drug price investigating subcommittee would have us believe that the government's sole interest is "simply with the price of drugs—a price which must be paid by someone under any system of medical care". I think there is a psychological reason which they hope to keep under cover. This Senate antitrust investigation is just another cunning approach in the attempt to slip socialized medicine in at the back door. It appears to me that Mr. Kefauver almost gave this fact away in his opening statement when he said: "It is not the purpose of these hearings to question in any way the American system of private medical practice." I react to this statement in the same manner I would if a small boy should rush into my office and exclaim: "Doctor, someone batted a baseball through your back window—and I don't want you to think that I did it."

If these investigators' thoughts were just in the drug field, they should also be concerned about quality as well as price. They certainly have shown a lack of interest in the cost of pharmaceutical research and manufacturing, and without research drugs would soon degrade in both quality and quantity. The Senator's line of reasoning in advocating that druggists be allowed to use generic instead of brand names, would throw the drug business into a tail spin within a short time. If one company spends a million dollars to produce a new drug, and another concern is allowed to copy the formula, pay none of the research cost, and market the product at a low price, the results would be disastrous. The better firms would go broke, initiative to find new drugs would be smothered and we would find ourselves advancing in reverse—back towards the "calomel and castor oil days".

I feel that these governmental probes are motivated, primarily, for publicity. If they can attract enough attention by their investigations of the major drug manufacturing firms, and lead the American people into believing that the prices of drugs are too high, it might be possible to gain a large number of sympathetic listeners.

They hope to stir up enough interest in the drug controversy to swing the spotlight away from the doctors for a while, give us a breathing spell, make us feel complacent and lessen our vigil against legislation like the Forand bill. It is their wish that we

don't get wise to their twofold purpose of these investigations in relation to the Forand bill itself. First, they will attempt to convince the lay public that older people, on social security, will not be able to pay the high drug prices—and that the government should step in to help. Second, if these tactics could get a Forand type of legislation passed without enough medical publicity to stir up strong opposition—they would be in position to widen social security to cover everybody. Then we would have socialized medicine under another name.

People, consciously, or unconsciously, associate drugs and physicians together. An aroused populace against drug prices would not be too friendly towards the medical profession. Such a situation would gain recruits for a more effective battle against the free practice of medicine. While we sit on the side lines, apparently unmolested, and watch the steam roller attempt to crush the drug firms, we must remain alert. We could get caught napping like Hitler did one time during World War II—when the Allied soldiers were issued heavy, long-handled underwear. As soon as the Germans got wind of it, they rushed up to Norway while our troops poured into Africa. It behooves us to watch out for all sorts of misleading tactics, because this drug battle is only a sham attack. The medical profession is their chief objective. They hope to find time to reorganize their forces, turn upon us without warning and launch a surprise attack where and when we might least expect it.

F. Clyde Bedsaul, M.D.

Floyd, Va.

Ferrous Fumarate in the Treatment of Iron Deficiency Anemia

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The response of twenty-five patients with iron deficiency anemia to treatment with ferrous fumarate, an oral haematinic, is described. This form of iron appears to have some advantage over others in common use.

IRON DEFICIENCY ANEMIA is a common clinical problem. It occurs with particular frequency in women during their years of menstruation and during pregnancy, as well as among geriatric patients, and in children. Almost invariably, barring some defect of absorption due to gastrointestinal disease or chronic blood loss from some other condition, these patients will respond to the oral administration of elemental iron with a satisfactory rise in red count and hemoglobin.

For many years ferrous sulphate and ferrous gluconate have been utilized with success in patients of this type. However, both of these preparations have undesirable side effects. Because of the relatively low percentage of elemental iron in both ferrous sulphate and ferrous gluconate relatively large doses of these preparations must be administered in order to achieve a desired therapeutic effect and this frequently produces gastrointestinal irritation. Thus many patients receiving oral iron preparations suffer nausea and even vomiting as well as disturbances in bowel function which may include diarrhea and/or constipation.

Ferrous fumarate is a newly developed anhydrous salt of ferrous iron and fumaric acid.[1] It is a stable reddish brown microcrystalline powder, considerably higher in its content of elemental iron (33%) than either ferrous sulphate (20%), exsiccated ferrous sulphate (29.2%) or ferrous gluconate (12%). Clinical studies with this tasteless powder have suggested that it may not only be higher in iron content, but it may be better tolerated than many forms of medicinal iron as well. Investigations into its emetic effects have shown that sixty-nine milligrams of iron per kilogram administered in the form of the fumarate compound are required to produce emesis in fifty per cent of animal studies as compared with 25 milligrams of iron per kilogram as ferrous gluconate and 17 milligrams of iron per kilogram in the sulphate form.[2]

Furthermore, in studies on acute toxicity, it has been found that administration of massive doses of the fumarate preparation to rabbits produces considerably less gastric irritation than comparable quantities of the sulphate or gluconate compounds.[3]

Preliminary clinical trials with ferrous fumarate in patients suffering with a variety of forms of iron deficiency anemias have shown it to be an effective therapeutic agent, producing good responses with a minimum of untoward gastrointestinal side effects, being well tolerated in most patients.

This paper reports the response to therapeutic doses of ferrous fumarate in 25 patients with varying degrees of iron deficiency anemia. These patients, including both private office and hospitalized subjects, include six children ranging in age from 8-12 years of age, seven adolescent girls, four pregnant women, and eight elderly geriatric subjects.

METHODS AND MATERIALS

Patients selected for the study were initially worked up with complete histories and thorough physical examinations. In addition a complete blood count as well as urinalysis, nonprotein nitrogen determination, liver function tests, and examinations of the stool for occult blood was performed on each patient. The patients were then given tablets (200 mg. each) of ferrous fumarate; one to two a day for the children, and three to four a day for the adults. Patients were instructed to take the tablets

The ferrous fumarate in this study was supplied as Fumasorb by Marion Laboratories, Kansas City, Missouri.

TABLE I

RESULTS OF TREATMENT OF IRON DEFICIENCY (HYPOCHROMIC) ANEMIA WITH FERROUS FUMARATE

Case	Age and Sex	Duration of Treatment (Weeks)	Red Blood Cell Count (Millions)		Hemoglobin (Gms. Per 100cc. of Blood and %)		Comments (Side-Effects)
			Before Treatment	After Treatment	Before Treatment	After Treatment	
1. (K.P.)	F-15	8	3.14	4.16	9.0(59)	13.0(84)	no side effects, dizziness and weakness disappeared after treatment
2. (K.B.)	F-14	9	3.95	4.5	10.2(66)	13.3(86)	no side effects
3. (N.C.)	F-16	8	3.96	4.6	11.8(77)	14.0(90)	no constipation or G. I. irritation
4. (F.G.)	F-15	8	3.63	4.4	10.5(68)	12.6(80)	response good, no side effects
5. (L.S.)	F-16	9	3.45	4.35	11.3(74)	13.5(88)	slightly constipated her first week, no other effects
6. (D.L.)	F-15	8	3.85	4.65	11.6(75)	13.5(88)	no effects
7. (S.B.)	F-14	8	3.95	4.22	11.1(70)	12.8(82)	slightly dark stool but no gastro-intestinal irritation
8. (E.F.)	M-8	9	4.12	4.33	12.7(81)	13.2(83)	no side effects
9. (D.F.)	M-11	9	3.98	4.5	10.4(67)	13.0(84)	no side effects
10. (K.B.)	F-8	8	3.99	4.32	11.9(75)	13.1(87)	no constipation, occasional dark stool
11. (P.C.)	F-6	9	4.01	4.65	12.2(78)	13.5(88)	no side effects
12. (M.N.)	F-6	9	3.75	3.98	10.4(66)	12.4(79)	slightly nauseous and dark stool, no constipation
13. (D.G.)	M-7	8	4.25	4.84	12.6(80)	14.0(90)	no side effects
14. (K.O.)	F-22	9	3.87	4.4	10.5(68)	12.8(82)	no severe side effects
15. (M.G.)	F-31	10	3.96	4.52	11.3(72)	13.0(84)	some constipation but no irritation or dark stool
16. (C.F.)	F-28	12	3.48	4.04	10.6(69)	12.7(82)	no gastric irritation
17. (M.G.)	F-30	14	3.81	4.03	11.5(74)	12.6(80)	occasional black stool but no constipation
18. (V.F.)	F-82	12	3.62	4.62	11.2(71)	13.0(84)	no side effects
19. (A.P.)	F-62	8	3.20	3.70	8.5(54)	10.4(66)	response not good, had some gastric irritability
20. (K.G.)	F-69	10	3.60	4.56	10.0(64)	13.2(86)	no side effects
21. (F.G.)	M-72	12	3.22	3.90	8.6(55)	11.5(74)	slight constipation but no irritation
22. (F.J.)	M-93	10	4.02	4.62	12.2(78)	13.0(84)	response was fair in this elderly patient G. I. irritation
23. (R.D.)	M-84	9	3.60	4.58	10.5(68)	13.2(86)	no side effects
24. (L.K.)	F-70	10	3.20	4.65	8.5(54)	13.4(88)	no side effects
25. (A.W.)	F-76	12	3.63	4.69	10.2(66)	13.7(89)	no side effects, good response

TABLE II

RED BLOOD CELL COUNT BY TYPE OF PATIENT

PATIENTS	Number	Average Initial Rbc	Total Rise (millions)	Total Weeks of Therapy	Average Rise/wk. (millions)	Average Rise/pt. (range)
Adolescent Females	7	3.70	4.96	58	0.086	0.71 (0.27-1.01)
Children	6	4.00	2.51	52	0.048	0.42 (0.21-0.64)
Pregnant	4	3.78	1.87	45	0.041	0.47 (0.22-0.56)
Geriatric	8	3.51	7.23	83	0.087	0.90 (0.50-1.45)
Total	25	3.73	16.57	238	0.070	0.66 (0.21-1.45)

RISE IN HEMOGLOBIN COUNT BY TYPE OF PATIENT

PATIENTS	Number	Average Initial Hbg	Total Rise Grams	Total Weeks of Therapy	Average Rise/wk. Grams	Average Rise/pt. (range) Grams
Adolescent Females	7	10.8	17.2	58	0.30	2.4 (1.7-4.0)
Children	6	11.8	9.0	52	0.17	1.5 (0.5-2.6)
Pregnant	4	11.0	7.2	45	0.16	1.8 (1.1-2.3)
Geriatric	8	10.0	21.7	83	0.26	2.7 (0.8-4.9)
Total	25	10.8	55.1	238	0.23	2.2 (0.5-4.9)

TABLE III

RISES IN HEMOGLOBIN ACCORDING TO INITIAL HEMOGLOBIN LEVEL

PATIENT No.	Weeks of Therapy	Initial Hbg	Final Hbg	Rise Hbg	Rise/wk.
24	12	8.5	13.4	4.9	.41
19	8	8.5	10.4	1.9	.24
21	12	8.6	11.5	2.9	.24
1	8	9.0	13.0	4.0	.50
20	10	10.0	13.2	3.2	.32
2	9	10.2	13.3	3.1	.34
25	12	10.2	13.7	3.5	.29
9	9	10.4	13.0	2.6	.29
12	9	10.4	12.4	2.0	.22
23	9	10.5	13.2	2.7	.30
4	8	10.5	12.6	2.1	.26
14	9	10.5	12.8	2.3	.26
16	12	10.6	12.7	2.1	.18
7	8	11.1	12.8	1.7	.21
18	12	11.2	13.0	1.8	.15
5	9	11.3	13.5	2.2	.24
15	10	11.3	13.0	1.7	.17
17	14	11.5	12.6	1.1	.08
6	8	11.6	13.5	1.9	.24
3	8	11.8	14.0	2.2	.28
10	8	11.9	13.1	1.2	.15
11	9	12.2	13.5	1.3	.14
22	10	12.2	13.0	0.8	.08
13	8	12.6	14.0	1.4	.18
8	9	12.7	13.2	0.5	.06

TABLE IV

RISES IN RED COUNT ACCORDING TO INITIAL RED CELL LEVEL

PATIENT No.	Weeks of Therapy	Initial Rbc	Final Rbc	Rise Rbc	Rise/wk
1	8	3.14	4.16	1.02	0.13
24	12	3.20	4.68	1.45	0.12
19	8	3.20	3.70	0.50	0.06
21	12	3.22	3.90	0.68	0.07
5	9	3.45	4.35	0.90	0.10
16	12	3.48	4.04	0.56	0.05
20	10	3.60	4.56	0.96	0.10
23	9	3.60	4.58	0.98	0.11
18	12	3.62	4.62	1.00	0.08
4	8	3.63	4.40	0.77	0.10
25	12	3.63	4.69	1.06	0.09
12	9	3.75	3.98	0.23	0.03
17	14	3.81	4.03	0.22	0.02
6	8	3.85	4.65	0.80	0.08
14	9	3.87	4.40	0.53	0.06
2	9	3.95	4.50	0.55	0.06
7	8	3.95	4.22	0.27	0.03
15	10	3.96	4.52	0.56	0.06
3	8	3.96	4.60	0.64	0.08
9	9	3.98	4.50	0.52	0.06
10	8	3.99	4.32	0.33	0.04
11	9	4.01	4.65	0.64	0.07
22	10	4.02	4.65	0.63	0.06
8	9	4.12	4.33	0.21	0.02
13	8	4.25	4.84	0.59	0.07

following meals. Blood counts were repeated each week and patients were advised to report any symptoms of gastric or intestinal irritability such as anorexia, nausea, vomiting, cramps, constipation, or diarrhea. All patients were followed for a period of at least two or three months. Laboratory procedures that were performed prior to the onset of the study were repeated at monthly intervals during the period of observation.

RESULTS

The results of this study are summarized in Table 1. It should be noted that all of the patients responded to therapy with a rise in both red count and hemoglobin. The rise varied considerably from patient to patient.

When the patients were divided into groups according to age, it was noted that the greatest response occurred in the geriatric patients and the adolescent females. These results were summarized in Table 2.

The overall group of 25 patients were studied over 238 patient weeks. They demonstrated a rise in red count totaling 16.57 million red cells, with an increment of 55.1 grams of hemoglobin, for an average red cell rise of .66 million per patient or an average of 0.07 million red cells per patient week. The hemoglobin concomitantly rose an average of 2.2 grams per patient or 0.23 grams per patient week.

It will be noted that the adolescent females had an average rise of .71 million red cells with a range of .27 to 1.01 and an average weekly rise of .086 with a concomitant increment in hemoglobin of 2.4 grams per patient with a range of 1.7 to 2.0 and an average weekly increment of .30 grams per patient.

The geriatric patients similarly showed an average rise of red count of .90 million with a range of .50 to 1.45 for an average weekly increment of .087 red cells per week, and a rise of hemoglobin that averaged 2.7 grams with a range of 0.8 to 4.9 and a weekly average rise of 0.26 grams of hemoglobin. The least response was noted in the six children. It was of considerable interest, however, that this group had the highest initial average hemoglobin and red count levels, whereas the geriatric patients had the lowest initial average of red count hemoglobin followed by the adolescent females.

Table 3 shows the rises in hemoglobin according to the initial hemoglobin levels. It will be noted that when the patients are arranged in order of their initial hemoglobin level (from the lowest to the highest) that the total rise in hemoglobin and the average rise per week tended to be greatest in the patients with the lowest initial hemoglobin levels. The same was found to be true in general with the red count as tabulated in Table 4; the patients with the lowest red count level had in general the greatest rise in red count and the largest increments per week. Thus in general, the more marked the anemia, the more dramatic the hematologic response to oral administered ferrous fumarate.

SUMMARY AND CONCLUSIONS

A series of 25 patients including six children, seven adolescent females, four pregnant women, and eight geriatric patients with varying degrees of iron deficiency anemia were treated for periods of 8-14 weeks with ferrous fumarate. All were examined carefully both clinically and by laboratory study at the onset of the investigation, and were observed at regular intervals during the therapy. All patients responded with rises in their red count and hemoglobin which were generally most marked in the patients with the lowest initial levels and least marked in those whose red count and hemoglobin were nearest to normal. Three patients complained of mild nausea and three others developed slight constipation.

It is concluded that ferrous fumarate is an effective oral preparation for the treatment of iron deficiency anemia. It is reasonably well tolerated, well absorbed, and produces a minimum of gastrointestinal irritation.

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Cytological Diagnosis of Uterine Cancer

Methods of Obtaining Cell Material and Evaluation of Results

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This paper reports a careful study of the cytological diagnosis of uterine cancer. It is worthy of consideration by all physicians who examine adult women.

THIS STUDY is based on statistics obtained from the Yates Memorial Clinic, Detroit, Michigan.

The Yates Clinic was opened in May 1950 and is staffed by members of the Wayne State University College of Medicine. Besides being of service to people of the community the *prime* purpose of the Yates Clinic is the performance of statistical research and the evaluation of various cancer detection tests.

Patients accepted for examination at the Yates Clinic are presumably asymptomatic and all are required to provide the name of a private physician to whom the results of the examination are sent. The examinee is not informed as to the diagnosis or advised as to treatment; but is referred back to her private physician. Three months following the examination a follow-up letter is sent from the Clinic requesting information from the doctor on any further diagnostic procedures and the ultimate management of the individual. In some cases, such as those in which a woman is found to have a proved or suspected cancer, the doctor is contacted directly without delay. By January 1, 1959, we had performed cytologic examinations on 35,777 women. Three hundred and eighteen were positive. Ninety per cent of those biopsied were found to have a carcinoma.

During a 4½ year period beginning May 1950, 15,832 women underwent routine vaginal cell examinations at the Yates Clinic[1] and 160 were reported positive. It is this group which will be reported in some detail. In all these cases two smears were obtained; one by spatula scraping of cervix; the other by removal of secretion in the posterior fornix.

In 140 of these positive cell examinations biopsies were obtained and 123 were proved by histological examination to be carcinoma; this resulted in an accuracy of 87.8%. Some cytologists, however, are of the opinion that a cell examination may prove to be more accurate than a biopsy because the material constituting the smear may be more representative and because it may contain neoplastic cells from an area missed by a biopsy. A ring biopsy or cold knife conization, of course, diminishes the possibility of error in this regard.

The value of cytology as a screening procedure is further demonstrated by the number of cancers in which no clinical evidence of malignancy of the cervix was present and the diagnosis was first suspected by the vaginal cell examination.

In a series of 147 cases of squamous cell carcinoma of the cervix diagnosed at the Clinic, 62, or 42 per cent, were detected first by cell examination after having been unsuspected by clinical examination. If it were not for this type of examination these cancers would have gone unrecognized and the most favorable time for therapy missed. Contrary to what might be assumed these were not all pre-invasive cancer. Naturally a high percentage (74.3%) of the pre-invasive cancers were first suspected by smear. It is significant, however, that even in those cancers which were histologically proved to be invasive 23.1 per cent were suspected by smear first—the remaining 76.9 per cent showing obvious evidence of disease (not necessarily malignant) on clinical examination.

METHODS OF OBTAINING VAGINAL CELL EXAMINATION

In May of 1957 we started a comparative study obtaining smears by the spatula scraping, smears

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from the posterior fornix fluid, the tampon method and endometrial aspiration. There were 7,515 patients of which 7,182 had tampons inserted and 6,491 of these or 87% returned with their tampons the next day. Of course, the removal of the tampons did not require a physician's presence.

Table I

Tampon Study

May 1957—April 17, 1959

Patients Examined	7,515
Tampons inserted	7,182
Tampons returned	6,491

87% of all female patients examined had Tampon Study completed. During this period in which 6,491 tampons were examined 20 cases were found who had positive smears.

Table II

20 Cases with Positive Tampon Smears

Positive Biopsy	19
Suggestive Biopsy	1
Total	20

Nineteen of these women were proved by biopsy to harbor a carcinoma and the biopsy in one case was suggestive of carcinoma but not definite. This seems to point out that the incidence of false positives in tampon smears are very low.

Table III

25 Cases with Suspicious Tampon Smears

No biopsy	3
Positive biopsy	16
Negative biopsy	6
Total	25

Twenty-five cases were found to have suspicious tampon smears. No biopsy was performed on three, 16 had positive biopsies, and six biopsies were negative.

Forty-two cases with Suspicious or Positive Tampon Smears had Biopsies—35 were positive.

This gives us, then, 83% accuracy and 17% false positive or suspicious.

Probably of more importance than the number of positive tampon smears correlated with the biopsy results is the comparing of the tampon to the usual cervical and vaginal smear method during this same period of time. Unfortunately in a number of instances in which carcinoma was proved by biopsy after positive cervical smears, tampon smears were not done. In the comparable series, however, for the same time interval, 41 cases of proven carcinoma of the cervix had both the routine smear and a tampon.

Table IV

41 Cases with Positive Biopsies

	Cervical Smear	Tampon
Positive	33 (83%)	19 (46%)
Suspicious	7 (15%)	17 (42%)
Negative	1 (2%)	5 (12%)
Total	41	41

Of these 41 cases 33 had positive cervical smears, seven suspicious and one negative. In the tampon series in the same patients 19 were positive, 17 suspicious and five negative. These figures indicate that the cervical smear is much more sensitive than the tampon method. This comparative study is obviously small and is to be continued.

During the interval between April 1, 1957, and April 17, 1959, 1,393 of the patients had endometrial aspirations performed.

Table V

Endometrial Aspirations

April 1, 1957—April 17, 1959

Performed	1,393	
Unsuccessful	646	
Total	2,039	
Positive Endometrial Smears		20
Suspicious Endometrial Smears		12

These were done on patients in or beyond the menopause or any patient with irregular menses. The examination was unsuccessful in 646. This resulted in 2,039 endometrial smears of which 20 were positive and twelve suspicious.

A follow-up of the positive endometrial smears shows 13 had cancer of the cervix by biopsy, four had cancer of the endometrium by D&C, and two had no D&C performed, one had negative D&C and negative cervix.

Table VI

20 Positive Endometrial Smears

Ca of cervix by biopsy	13
Ca of endometrium by D&C	4
No D&C	2
Negative D&C & negative cervix	1
Total	20

This table then demonstrates that the endometrial smears were fairly accurate and that only one was proven not to harbor a cancer. This one, of course, was open to some doubt pending further investiga-

tion. The two that had no D&C, of course, mean nothing.

Follow-up of 12 suspicious endometrial smears shows that three proved to have carcinoma of the endometrium, two cancer of the cervix, six had no biopsy, and one had cervicitis.

TABLE VII
12 SUSPICIOUS ENDOMETRIAL SMEARS

Cancer of Endometrium	3
Cancer of cervix	2
No biopsy	6
Cervicitis	1
Total	12

I am not sure what to make of this study other than the fact that we are picking up some endometrial carcinomas which we would not have otherwise found. Actually, seven endometrial carcinomas were picked up by the endometrial aspiration method now being used.

THE FALSE POSITIVE REPORTS

In an effort to establish more fully the value of the cytological test and to study the causes of the so-called false positive smears, 100 consecutive patients with positive smears diagnosed at the Yates Clinic were followed from the initial examination to their ultimate diagnosis.[2] This was accomplished by first contacting the patient's doctor and encouraging him to perform additional biopsies, and when indicated dilations and curettages. In instances where the patient had undergone surgery the pathological material was obtained and the slides reviewed by the Yates Clinic pathologists. In addition to this intensive examination the smears and the biopsy material obtained at the Clinic were also studied carefully by a special panel of reviewing pathologists.

Of these 100 cases 58 were confirmed immediately at the Clinic by simple punch biopsy but 42 were not confirmed; 35 of the remaining 42 that were unconfirmed resulted in negative biopsies and seven had no biopsies performed. There are usually no suspicious areas in in-situ carcinoma and often none in early invasive carcinoma. We have encouraged taking of four quadrant biopsies at the Clinic since cold conization cannot be done.

TABLE VIII
100 CONSECUTIVE POSITIVE SMEARS OF CERVIX

Smear confirmed by Biopsy at Yates		58
Smear not confirmed at Yates		42
Biopsy negative	35	
Biopsy not done	7	
Total		100

On further study of these 42 cases it was learned that two of the patients who did not have a biopsy performed at Yates were subjected to punch biopsies on follow-up examinations and proved to have carcinoma. In 15 cases additional material from the cervix confirmed the cytology diagnosis. This was accomplished in seven instances by cold cone or ring biopsy of the cervix; in one instance by additional punch biopsy and in seven instances by total hysterectomies for other reasons the excised cervices were made available for pathological examination.

TABLE IX
REASON FOR CHANGING NON-CONFIRMED STATUS TO CONFIRMED "POSITIVE"

Biopsy not performed at Yates, but Cervical biopsy "Positive" on follow-up		2
Additional biopsy material from cervix		15
Cold cone	7	
Punch	1	
Hysterectomy	7	
Carcinoma not in Cervix		4
Endometrium	3	
Vulva	1	
Review of biopsy by Panel		6
		27

In three additional cases the carcinoma actually involved the endometrium rather than the cervix and was discovered only after a diagnostic curettage was performed. In one patient the carcinoma involved the vulva and the positive smear resulted from this lesion rather than from carcinoma of the cervix or uterus. In six cases the biopsy material was examined by a group of pathologists and the diagnoses changed from benign to malignant disease. This resulted in 27 of the 42 cases confirmed by biopsy and other follow-up procedures, leaving 15 still unaccounted for. Review by the cytologists resulted in downgrading from a positive to an atypical or suspicious smear in eight cases. In two instances no biopsy of the cervix was performed at the Yates Clinic or elsewhere, and in five cases adequate biopsies were obtained and were properly interpreted as benign.

TABLE X
SUMMARY OF 100 CONSECUTIVE PATIENTS WITH POSITIVE SMEARS OF CERVIX

58 proven malignant at Yates by Biopsy	58%
85 ultimately proven malignant (27 additional cases on follow-up)	85%
8 positive smears down-graded to suspicious or atypical	
85 of 92 ultimately proven malignant	92%

DISCUSSION

The most common reason for initially failing to confirm the positive smear in this series was failure to obtain an adequate biopsy. Of the original 42 discrepancies, 21 fell within this category. Positive smears may be confirmed by simple punch biopsy done in a doctor's office. The biopsy must be adequate with regard to size. It must come from the involved area, and must be handled in such a way as to show an adequate pathological examination. Tissue which has been crushed or in any other way damaged so that the fine histological detail is no longer discernible must be considered inadequate. Any burning of the tissues also will render the specimen unsuitable for histological diagnosis. Sometimes the biopsies are too small, or are taken from far out on the portio vaginalis when the involved area is near the internal os.

When a patient has a positive smear she presumably has a malignancy and the burden of proof must be accepted by the clinician. If the simple punch biopsy is inconclusive or negative, a four-quadrant punch biopsy may be the answer. If the positive smear is still not confirmed, hospitalization for cold cone biopsy and dilation and curettage should be considered. Three of the above patients with a false positive smear proved ultimately to harbor an endometrial carcinoma.

A common mistake made by some physicians is that of dilating the cervix and curetting the endometrium before a cervical biopsy. Under such circumstances the biopsy often is inadequate in that all of the surface epithelium has been removed from its normal position.

It should be emphasized that of the seven instances in which cold conization of the cervix revealed a malignancy when the punch biopsy was diagnosed as nonmalignant, four proved to be invasive carcinoma. This is a very important consideration for it is not generally appreciated that one can miss an invasive carcinoma of the cervix by punch biopsy. Of the seven instances in which a hysterectomy changed the diagnosis one turned out to be an invasive carcinoma of the cervix. In four cases the biopsy was inadequate because it was of the wrong organ or tissue; three of these were found to be carcinoma of the endometrium and the original biopsies were of the cervix; the fourth case was a carcinoma of the vulva.

In eight of the 100 cases a review of the smears indicated that cell alterations were incorrectly interpreted as malignant. It is important, therefore, that cytopathologists be well-versed and experienced, for with better understanding of cell changes resulting from various benign reactions there will be a decided reduction in the number of true false positive smear diagnoses made.

Another facet of this problem deserving of emphasis is the matter of evaluation of tissue changes as present in the biopsy. It is regrettable, but none-theless true, that the diagnosis of carcinoma in situ is still to some extent a subjective matter. The definition of non-invasive carcinoma utilized in this study stipulates that the change in the epithelium must be such as to resemble that which is seen in invasive carcinoma. Since there are several varieties of patterns of invasive carcinoma it follows there are corresponding varieties of patterns for intra-epithelial carcinoma. Despite wide experience in this area there will be truly borderline cases in which the changes appear to be more than atypical hyperplasia or dysplasia and yet still somewhat less than non-invasive carcinoma. For this study the Yates Clinic maintains a panel of three pathologists whose task it is to review such cases.

In some instances, depending on the judgment of the private physician, if the smear remains positive an exploratory laparotomy with possible hysterectomy may be considered.

Even after prolonged follow-up, review of original and additional biopsy material and re-examination of the cytologic smears there still remain five of the 100 cases unresolved. Even though this is a small percentage it involves five human lives and therefore still is a subject of much concern to the Yates Clinic. So accurate is the vaginal cell examination diagnosis of cervical cancer that in the case of "false positive" reports it is the studied opinion of the Yates Clinic medical staff that continued follow-up should be resumed until each and every one has been resolved to the satisfaction of all concerned.

CONCLUSION

Use of the *vaginal cell* examination, popularly known as the "Pap smear", has been proved at least 90 per cent accurate as an effective screening technique for detection of cancer of the cervix, and therefore should be employed by every practicing physician in the physical examination of all adult women.

A definitely positive cell examination indicates that the patient has cancer. The clinician must then assume the responsibility of proving it beyond a

doubt by obtaining a proper biopsy. The most effective way to achieve this is to hospitalize the patient for cold conization or ring biopsy and a diagnostic curettage. This, in our experience, is the only sure method of obtaining sufficient tissue and of determining the extent of the lesion.

So accurate is the vaginal cell examination in the diagnostic of cervical cancer, that it is our considered conviction that continued follow-up of every unconfirmed positive report should be resumed until each and every case has been resolved to the satisfaction of all concerned.

The most sensitive method of obtaining material for a cytologic examination to rule out or detect uterine cancer is to use both the vaginal secretion and the cervical scraping.

The tampon method does not appear to be sensitive enough for general use. It seems obvious that the best method of diagnosing pelvic disease is by performing a careful bimanual examination combined with a vaginal cell examination.

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Reduces Diabetic's Insulin Needs

Treatment of mouth diseases in diabetics has been found, in some cases, to reduce their insulin requirements.

Capt. Ralph C. Williams, Jr., a physician, and Maj. Charles J. Mahan, a dentist, of the U.S.A.F. Hospital, Maxwell Air Force Base, Air University, Montgomery, Ala., reported on the effects of oral therapy in nine diabetics in the February 20 Journal of the American Medical Association.

"Seven of the nine patients with diabetes and periodontal oral disease who underwent elective periodontal therapy showed significant subsequent reduction in insulin requirement."

Insulin is used to control diabetes. The nine patients suffered an inflammation of the gums or the tissues surrounding a tooth, in addition to diabetes. They were treated by surgery or extraction of teeth.

"Recently we have been impressed by the striking frequency with which the relatively young diabetic patients seen in a military practice manifest extensive periodontal disease. . . ."

Although there are conflicting theories on what causes periodontal disease, they said, it was their "impression that diabetes and chronic, destructive periodontal disease are separate entities," but added: "Diabetes may be adversely influenced by the presence of periodontal disease, and conversely periodontal disease may be more severe in the diabetic state."

Dr. Williams is now on the staff of the medical service, Massachusetts General Hospital, Boston.

The Oral Cholangiogram

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Oral cholangiography is a safer procedure than the intravenous method. In most situations, it gives satisfactory results and is the logical first step in the examination of the biliary tract.

IN THE MARCH 21 issue of the Journal of the American Medical Association, Twiss and Gillette[1] published a paper on oral cholangiography. The basic conclusion of this paper was that oral cholangiography is recommended as it will give 65% additional visualization of the gallbladder and/or bile ducts as compared to 5% to 10% with the usual double dose technique. This stimulated renewed interest on our part in this procedure, as we had been reluctant to use the intravenous cholografin because of the danger of serious reaction. We have followed the procedure as recommended with what we feel are good results to date. In fact, it has been necessary to use the intravenous cholografin only several times since we have adopted this method.

The technique as recommended by Twiss and Gillette is essentially a triple dose method plus paregoric. The procedure is as follows: On the evening prior to the examination, the patient has a fat-free supper at 6 p.m. After that, intake of fluids and solids is restricted to the following: At 7 p.m. the patient is given 6 tablets of telepaque with a glass of water. At 7:30 p.m. the patient is given 6 additional tablets of telepaque with a glass of water. At 9 p.m. a teaspoon of paregoric in a glass of water is administered. At 7 a.m. on the following morning 6 more tablets of telepaque with a glass of water are given and at 9 a.m. 2 teaspoons of paregoric in a quarter glass of water are administered. Roentgenograms are obtained at 10 a.m., 11 a.m., and 12 noon with indicated variations. If no shadow of the gallbladder or bile ducts is obtained at this time, then roentgenograms are repeated again in twenty-four hours.

As with any other procedure which depends on the excretion of contrast media, the success of the procedure depends on the functional capacity of the liver. It is generally agreed that if the patient is clinically jaundiced, or the icterus index is 12 to 15, or the bilirubin 5 mgs. percent or more, the likelihood of obtaining a satisfactory examination is remote. In fact, at the Lahey Clinic[2] they do not attempt a study if there is clinical jaundice present, the bilirubin is over 4 mgs.% or the BSP shows 40% retention or more. Rosenblum and Schwartz[3] reported on a series of patients where intravenous cholangiography was done in the presence of jaundice and they felt that if values for the icterus index were not over 12 and the bilirubin was not over 1.7 mg.%, especially when jaundice was waning, one would be justified in an attempt to demonstrate the duct system. It may be that with the oral technique these values could be pushed up a little bit as there would be a longer period for excretion to take place which would enhance the possibility of demonstrating the biliary tree.

After reviewing the recent literature on cholangiography both by the intravenous and oral technique, several general statements can be made applying to this subject.

First, Twiss and Gillette[1] felt that in 25% of the cases of catarrhal cholecystitis a normal gallbladder shadow could be demonstrated by the oral cholangiographic technique which would fail to visualize using the usual routine methods; thus, possibly sparing this group of patients operative procedure.

Second, visualization of the common bile duct but not the gallbladder is presumptive proof of cystic duct obstruction. This is true whether the intravenous technique or the oral cholangiographic technique is used. Consider the case where a good gallbladder shadow is demonstrated but the common duct is not seen. In this instance no conclusions could be drawn regarding the presence or absence of

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stone in the common duct. This occurred in 12 cases of the series reported by Twiss and Gillette[1] and three of these cases were explored and two had stenosis of the sphincter of Oddi without presence of stone, and one had an acute cholecystitis without stones in the gallbladder but a stone was found in the common duct. These authors felt that the greatest field for usefulness of the oral cholangiographic method was in furnishing definite diagnostic information on patients with diseased gallbladder and partial cystic duct obstruction. In their experience this procedure was successful in cases where intravenous cholografin had failed. They suggest that this is possibly on the basis of a longer period of excretion of the contrast media.



Fig. I. Normal oral cholangiogram demonstrating the gallbladder, coiled cystic duct and the intra and extra hepatic ducts. Note the hepatic radicles are about one half the diameter of the common duct.

Third, it is generally agreed there is no support for the theory that there is a normal compensatory dilatation of the common bile duct following cholecystectomy. This has been proved by animal studies in which it has been demonstrated that there is an irregular dribbling of bile into the duodenum following removal of the gallbladder and no compensatory dilatation of the bile ducts took place. Thus, it should be safe to assume if dilatation of the bile ducts occurs after cholecystectomy then some degree of obstruction is present.

As regards the incidence of common duct calculi, Wise, Johnson and Salzman[2] of the Lahey Clinic reported an incidence of common duct calculi in 2460 cases operated on for gallbladder disease of 10% to 16%. These authors also reported 153 cases were followed for a period of 2 to 12 years and the incidence of residual calculi in the common duct was approximately 8%. It was their experience that only in more severe cases of gallbladder disease, and presumably of a more chronic nature, were cases of fibrosis of the ampulla of Vater or sphincter of Oddi found. In this group of patients, fibrosis of the sphincter of Oddi is found to be the most common cause of dilatation of the common bile duct in the absence of visualization of the gallbladder. Carcinoma of the pancreas was second and calculi third.



Fig. II. Oral cholangiogram demonstrating a radiolucent stone just above the ampulla. Note the change in morphology of the duct system with straightening and tubulation of the common duct as well as dilatation and beginning tortuosity of the hepatic radicles. The gallbladder is not visualized constituting presumptive proof of cystic duct obstruction.

Let us turn now to the consideration of some of the anatomic features which are of importance in the study of the biliary tree. The diameter of the common bile duct has been the subject of considerable study by numerous authors.[4,5,6,7] Some people have attributed narrow limits to the size of the normal duct, while others have accepted a wider range, and still others have felt that the variation was too wide to attribute undue significance to actual measurements. It would seem that the people at the Lahey Clinic, referred to above, have achieved a happy medium in this respect by suggesting that the diameter of the normal bile duct falls within the limits of

2 mms. to 12 mms. The major biliary radicals are normally approximately one-half the diameter of the common bile duct. There appears to be no relationship between the size of the common bile duct and the presence or absence of stones. A bile duct of normal diameter may contain stones equally as well as one which is abnormal in diameter. The most that can be said about the common duct that is abnormal in diameter is that at sometime or other there has been disease and possibly calculi have been passed, unless of course calculi can be demonstrated within the lumen of the duct or obstruction can be demonstrated as pointed out in a later paragraph relative to fibrosis of the sphincter of Oddi. Referring again



Fig. III. Oral cholangiogram demonstrating a cystic duct and/or a gallbladder remnant. This contracted following fatty meal. Common duct normal in diameter and morphology.

to the report from the Lahey Clinic[2], these authors reported that in the post cholecystectomy group of patients their experience suggests that only in the range of 3 mms. to less than 5 mms. is size alone indicative of a completely normal duct. In the range of 16 mms. to 30 mms. size alone appeared to be indicative of some degree of obstruction. A word of caution should be inserted here, as the experience of other investigators would indicate that additional factors should be considered before postulating that an obstruction is present. If, for example, contrast media can be seen to have passed from the common duct into the duodenum, and this is particularly true with the intravenous cholografin method, then it would be hazardous to state unequivocally that obstruction is present, even though the common duct diameter measured more than the limits stated above. At the Lahey Clinic then, in only 14% of cases does size alone, as a sole criterion, indicate presence or absence of obstruction. In the remaining 85% other criteria are necessary. Thus, it appears that the range where size alone is of no value in predicting patency or obstruction is in the 5 to 15 mm. group. They postulated that some degree of obstruction may be expected in ducts measuring more than 15 mms.

In cases of suspected fibrosis of the sphincter of Oddi, the best method is probably the intravenous cholografin technique. The interpretation is based



Fig. IV. Oral cholangiogram demonstrating a cystic duct and/or a gallbladder remnant containing an opaque stone. Common duct measures 1 cm. approaching the upper limits of normal. After fatty meal the remnant contracted and the common duct became less dense suggesting there was probably no obstruction at the sphincter of Oddi.

on the time-density-retention concept.[2] The rationale of this procedure is that the intravenous cholografin method is essentially a clearance test for liver function. The dye is normally excreted from the liver in a period of 1 to 2 hours and if the common bile duct persists in being opacified beyond this limit, then some degree of obstruction can be expected. Of course, drugs or other procedures that might affect the tone of the sphincter of Oddi are not administered when this procedure is used.

Strictures of the bile duct are difficult to demonstrate. In the first place, usually the liver damage is so great that any type of contrast media study is not indicated. When these can be demonstrated there are marked changes present with a marked differential in size above and below the level of the stricture. This is characterized by an abrupt transition from the two levels.

This general morphology of the common bile duct is of importance in contributing to the diagnosis of obstruction. The bile duct is normally tapered and quill-shaped in appearance. In minor degrees of obstruction, the duct tends to lose its usual tapered shape and assume a more tubular configuration. In more severe degrees of obstruction, the biliary radicals also appear slightly distended. As obstruction progresses, there is gross dilatation of the common duct and tortuosity of the biliary radicals.



Fig. V. Oral cholangiogram demonstrating a cystic duct and/or a gallbladder remnant containing a radiolucent stone. Common duct measures 8 mm. and is within limits of normal. After fatty meal the remnant contracted and the common duct became less dense suggesting normal function of the sphincter of Oddi.

Sachs and Partington,[8] writing on the cholangiographic diagnosis of pancreatitis, provide a very convenient anatomic division of the bile duct. They divide the common duct into three portions. *First,* a proximal or duodenal or supra-pancreatic segment equal to about one-third the total length of the duct. *Second,* a middle or pancreatic segment which is equal to about two-thirds of the total length. *Third,* a trans-duodenal segment which represents that portion within the wall of the duodenum. They classify the deformity of the common duct associated with pancreatitis into four stages:

1. Lateral displacement of the pancreatic segment of the duct.
2. Angulation between the proximal and middle segments.
3. Proximal dilatation of the duct with obstructive reflux into the intro-hepatic ducts producing dilatation and blunting which may be associated with formation of calculi.
4. Eventual compression of the pancreatic segment.

These changes have also been described in association with malignancy of the head of the pancreas by Levene and Scheff.[9]

It is well to keep in mind the anatomic position and configuration of the cystic duct. This duct leaves the neck of the gallbladder and proceeds in a coiled fashion posteriorly, medially and at times superiorly to join with the common hepatic duct to form the common bile duct. It is often not possible to demonstrate this duct completely due to this anatomic configuration, and small calculi producing only partial obstruction may be easily overlooked in this area. The duct also contains the valves of Heister which add to the difficulty of interpretation where the possibility of small calculi is concerned. We should also keep in mind that the cystic duct offers very little resistance to the flow of bile in either direction and the bile ordinarily enters the gallbladder at all times except when it is fully distended or actively contracted. This fact forms the basis for the assumption that cystic duct obstruction is present when the

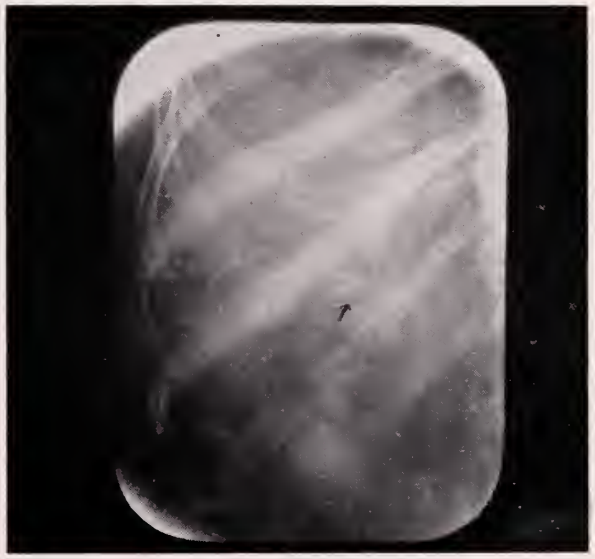


Fig. VI. Oral cholangiogram demonstrating a cystic duct remnant. This contained a poorly opacified stone imbedded in the stump. The media accentuates this faint density. Common duct measures 1 cm. and is within the limits of normal showing a smooth curve.

standing features of the radiographic study of the biliary tree gained through experience with the intravenous cholografin method by many observers have been pointed out and applied to the oral technique. It would seem that the oral method is a logical first step in the study of the biliary tract and the intravenous method can be reserved for those cases where this procedure fails to yield the desired information.

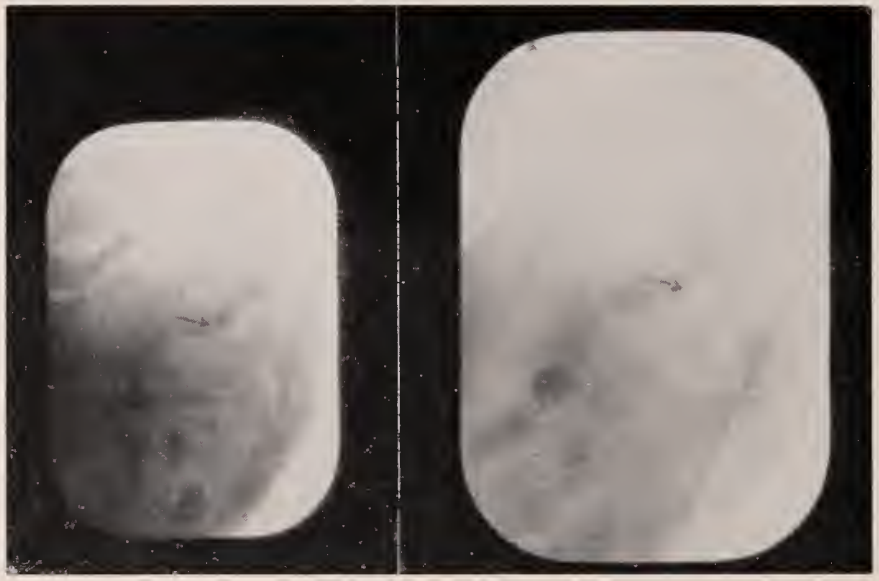


Fig. IX. Normal intravenous cholografin study after cholecystectomy. These films were made 20 minutes after injection. Note the contrast media in the duodenal bulb. If only an A.P. view had been made this might easily be confused with a cystic duct remnant, but the oblique view separates the common bile duct and clearly shows the media to be in the duodenum. This finding also indicates that the sphincter of Oddi is patent and that the liver excretion dribbles into the duodenum when there is no gallbladder storage possible. The common duct measures 7 mm. and shows normal morphologic characteristics. At the end of two hours the density of the common duct was reduced by about 50% thus complying with the time-density-retension concept for an adequately functioning sphincter of Oddi.

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The Typhoidal Carrier and Cholelithiasis

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A timely reminder that the typhoid carrier is still a problem. Here are two cases associated with cholelithiasis.

THE ASSOCIATION of cholelithiasis and the chronic typhoid carrier has been mentioned from time to time in surgical literature but is an extremely rare condition. In recent years the control of typhoid fever with antibiotic therapy has so reduced the incidence of this disease that finding the chronic typhoid carrier is unusual. This is a short paper in which this condition is discussed and two cases are presented. Emphasis is made of the fact that the occasional typhoid carrier still exists and may often be related to infected bile or gallstones.

A review of the literature on this topic reveals that Huson,[1] in 1835, first described the presence of acute typhoid disease of the gallbladder in a young woman in which perforation occurred. Gilbert,[2] in 1890, again described the condition, the association of acute cholecystitis and typhoid fever. Since that time it has been established on numerous occasions that there is a relationship between the infected gallbladder and the chronic typhoid carrier. Forster[3] indicated that the normal gallbladder with proper emptying is capable of destroying the typhoid bacillae by adequate discharge of the infected bile into the G. I. tract. However, the diseased gallbladder containing stones or emptying poorly is a source of continued infection with E. typhosa. In the early 1900's Thomas[4] collected a series of 154 cases of cholecystitis during a typhoid fever epidemic in children. Between the years 1927 and 1939 C. K. Chi[5] found only four cases of typhoid fever with associated perforation of the gallbladder. In 1949 C. N. Liu[6] presented a report of typhoid perforation of the gallbladder in children. It is apparently true that the Orientals because of their diet, their lack of antibiotic coverage, and perhaps poor hygienic living conditions more frequently develop this disease. In his series Dr. Liu presented nine cases of gallbladder perforation among 228 cases of typhoid fever admitted to the hospital between 1945 and 1949. The occurrence of acute cholecystitis or perforation in typhoid fever in this country is relatively rare. Machemer,[7] in 1952, presented a case of acute cholecystitis caused by E. typhosa and reviewed the literature available in this condition. Whereas most of these reports deal with the disease of acute cholecystitis in association with typhoid fever, this report deals with the chronic typhoidal carrier and cholelithiasis which may be an asymptomatic association. We have been unable to find a recent case report in the literature to describe this.

CASE REPORTS

Case 1—A sixty-six year old white male grandfather was diagnosed as having typhoid fever by repeat fecal examination by the Virginia State Department of Health, in January 1957. This patient's family had had repeated attacks of typhoid fever and all investigations done regarding sources of contamination, that is, food, water supply, etc. were negative. Stool examinations of this patient were continually positive for E. typhosa and for that reason x-rays of the G. I. tract and gallbladder were performed revealing gallstones to be present. The patient was asymptomatic as far as the cholelithiasis was concerned, but because of the positive stool cultures cholecystectomy was advised and accepted.

Cultures taken directly from the large laminated gallstone revealed E. typhosa. Stool cultures following this procedure were initially positive but cleared promptly on Chloromycetin and have remained negative for a period of two years.

Case 2—A fifty-six year old white male had repeat stool examinations positive for E. typhosa as studied by the Virginia State Department of Health. This patient was also asymptomatic as far as the cholelithiasis was concerned but because of the continued positive stool cultures and the fact that several epi-

sodes of typhoid fever had occurred locally, an exploratory laparatomy was advised and accepted. At this time cholelithiasis was found to be present and a cholecystectomy and operative cholangiogram were performed. The patient had E. typhosa cultured from the gallstones. Cultures of the G. I. tract immediately following this procedure were taken and again revealed positive cultures of E. typhosa. However, the patient was placed on Kantrex and Chloromycetin and repeat stool cultures have been negative since that time. The patient is one year postoperative and feeling well.

DISCUSSION

The association of cholelithiasis in the chronic typhoid carrier is discussed and two cases presented.

This is an extremely rare condition which apparently could well have gone unnoticed if it were not for the alertness of the family physician and the State Health Authorities. It emphasizes the fact that if all known sources of typhoid infection are negative, that is, water supply, sewerage disposal systems, and sources of food contamination, then each member of a family having typhoid should be thoroughly investigated as a typhoid carrier. The presence of cholelithiasis should be kept in mind as a source of this infection and if found a cholecystectomy should be advised. The patient having continued stool samples positive for E. typhosa must harbor this infection either within the G. I. tract or within the gallbladder, that is, infected bile or stones. The bile of a poorly functioning gallbladder may be the source of this infection with continual G. I. seedings since adequate emptying of the gallbladder into the small intestine does not regularly occur. The presence of gallstones is all the more evidence of a poorly functioning gallbladder and a strong indication for cholecystectomy. The longterm use of appropriate antibiotics following laparatomy is urged since recurrent infections may otherwise occur.

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Certain Drugs Can Cause Gout

Certain drugs for treating hypertension should not be given patients suspectible to gout, a heart researcher has warned.

"For the present, it appears propitious to avoid the use of chlorothiazide and other benzothiadiazine compounds in patients with a history of gout and to suspect the possibility of gout in patients treated with these drugs who complain of aching and painful joints," according to Dr. Leon J. Warshaw, of the Cardiovascular Research Unit, Beth Israel Hospital, New York.

Writing in the February 20 Journal of the American Medical Association, Dr. Warshaw said hyperuricemia, an excess of uric acid in the blood and a characteristic of gout, "is a relatively frequent concomitant of chlorothiazide administration. . . .

"Although the mechanism by which chlorothiazide produces hyperuricemia, and the relationship between this hyperuricemia and the clinical manifestations of gout, are not clearly understood, these phenomena are a drawback to the use of this drug, especially in patients with a history of gout."

A recent report suggesting a relationship between hyperuricemia and coronary artery disease and heart attacks "makes it urgent that the true significance of the hyperuricemia be established."

Gout is a disease in which the primary symptom is a painful inflammation of the joints of the hands or feet, and especially the big toe.

The Treatment of Advanced Mammary Carcinoma

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Although cure is not accomplished, much can be done for the woman with recurrent cancer of the breast by hormonal control.

THE TREATMENT of mammary carcinoma which has spread beyond the possibility for surgical care represents a great challenge today. Considerable progress has been made in obtaining temporary remissions in advanced disease. This progress is the result of the common occurrence of breast carcinoma, the frequent failure of conventional therapy, and the response of the carcinoma to endocrine control to a variable degree. The basic philosophy in the treatment of widespread breast cancer has been the exploitation of any remnant of normal hormonal control mechanisms of normal mammary tissue in the tumor. At the outset it must be admitted that little pertinent information on the hormonal control of normal human mammary tissue is available. Studies of the hormonal requirement for mammary growth in the rat would indicate that both steroid and protein hormones are necessary for normal development. Estrogen, progesterone, growth hormone, prolactin, and possibly corticosteroids have all been implicated in the normal growth process in this species.

Today the physician has available a considerable hormonal armamentarium for the control of advanced breast cancer. Oophorectomy, adrenalectomy, hypophysectomy and the administration of steroid hormones are all valuable procedures. In this clinic we have tended more to the use of ablative surgery to accomplish hormonal control rather than the use of exogenous hormones, and for this reason the ablative procedures will be emphasized in the discussion. Therapeutic problems will be illustrated in the following case reports.

Case I—Mrs. M.H. had a left radical mastectomy for carcinoma performed in 1951 when she was 38 years old. Six months later a right simple mastectomy was done for recurrent tumor and at this time she was treated by means of irradiation to her ovaries. In 1957, five and a half years after her recurrence she developed abdominal pain with nausea and vomiting. Physical examination demonstrated a pelvic mass with fixation of the cervix and uterus. Radiologic examination showed multiple osteolytic metastasis. Abdominal exploration demonstrated that the pelvic tumor which compressed the rectum externally and was densely adherent to all pelvic structures was microscopically consistent with metastatic mammary carcinoma of the type present in the primary. Hypophysectomy was performed in March of 1957 and there was prompt symptomatic improvement following this procedure. Two months following hypophysectomy objective regression of tumor was noticed by rectal and pelvic examination. Four months following surgery, pelvic examination revealed no evidence of tumor whatever. For the last two and a half years this patient has worked as a beauty operator, on her feet most of an eight hour day. When her work is over she goes home and does a moderate amount of housework. She has had a perfectly normal life in this interval.

Case II—Mrs. A.R.C. at the age of 43 had a radical mastectomy in 1951 accomplished for an aplastic infiltrating duct carcinoma of the left breast with axillary metastases. Because of the patient's age and nature of her lesion pathologically she had a bilateral oophorectomy done prophylactically several weeks following the initial operative procedure. She was followed at frequent intervals without evidence of recurrent disease until 1958 at which time after a fall in her home she sustained a fracture of the right humerus. X-rays of the site of injury revealed the lesion to be a pathologic fracture. A skeletal survey demonstrated bony metastases in the spine, pelvis, humeri, ribs, and skull. Within a period of two months the patient's condition de-

teriorated rapidly and she became bedridden because of bone pain. In November of 1958 bilateral adrenalectomy was done. One week following this procedure she was free of bone pain and ambulatory. In a period of a month to six weeks she returned to her usual activities. Many osteolytic sites became osteoblastic.

She continued asymptomatic for a period of 11 months. Then because of reappearance of osteolytic lesions on routine bone survey films which were obtained in the course of follow-up she was advised to have hypophysectomy done. This procedure was accomplished without incident and her subsequent course is still to be determined.

The selection of optimal treatment for advanced breast cancer today is difficult because all of the methods are palliative. We do not propose to discuss the question of prophylactic oophorectomy. The ultimate value of this procedure will be determined by careful large scale study. Until unequivocal data on the value of this procedure is at hand each physician will have to use his judgment and decide the question on an individual basis.

The first attempt at the treatment of recurrent mammary cancer in a premenopausal woman should be bilateral oophorectomy. We believe that this should be carried out immediately upon the detection of recurrence. Radiotherapy should be deferred until such time as a definite statement can be made about the clinical response to oophorectomy. The information gained from such clinical observations is of value to the patient. Those women who respond well to oophorectomy are more likely to respond to other endocrine treatment when the inevitable relapse from the benefits derived from oophorectomy occurs.

The treatment of recurrent mammary cancer of the postmenopausal women requires more judgment since only about 10% of these patients will show remission following oophorectomy. We do not carry out this procedure in this age group. The patient is evaluated to determine the extent of the metastatic disease; whether it is localized or disseminated and whether the rate of progression of the recurrence warrants definitive treatment. Radiotherapy is the treatment of choice for localized disease. Hormonal treatment is necessary for generalized disease which is spreading rapidly or is symptomatic. In this clinic the treatment of choice for disseminated symptomatic mammary cancer in the postmenopausal patient is either adrenalectomy or hypophysectomy. The palliative results obtained with these procedures do not differ statistically from each other. If the age or state of health of the patient precludes surgery the use of exogenous therapy is indicated. Androgen therapy in this clinic is administered in the form of testosterone propionate in oil 100 milligrams intramuscularly 3 times a week. We have avoided the use of oral androgens or of injectable depot type preparations. Androgen therapy may stimulate the growth of the tumor instead of retarding it. The safest way to insure that the patient is adequately followed during treatment is to have a doctor or nurse administer the medication by injection at frequent intervals. If obvious progression of soft tissue disease occurs the treatment is promptly stopped. If the patient has metastatic bone disease, the advent of nausea, vomiting, polyuria, polydipsia, and deterioration should at once arouse the suspicion of hypercalcemia. If hypercalcemia results during the steroid therapy it should be promptly stopped. The patient should then be placed on a low calcium diet. With this regimen, improvement of the hypercalcemia usually occurs promptly. Virilization, increased libido, and sodium retention may occur during androgen treatment but rarely becomes severe enough to force cessation of treatment. Estrogen therapy is contraindicated except in those patients who are 10 years or more postmenopausal. The administration of stilbesterol by mouth, 5 milligrams 3 times daily, is inexpensive and is as effective as natural estrogen. While on treatment the patient should be observed for signs of stimulation of the disease including the advent of hypercalcemia. Corticosteroid therapy should be reserved for those patients who might be helped by ablative surgery if only a temporary remission can be obtained from an especially threatening aspect of mammary cancer. The remissions from corticosteroid therapy are infrequent and brief but are achieved rapidly. Bleeding due to marrow involvement from tumor is an especially ominous symptom which precludes surgical interference. However, patients with this grave complication have been successfully adrenalectomized after a hematologic remission with cortisone had been obtained. Cortisone is administered in doses of 50 milligrams by mouth every 4 hours, and the patient is observed for complications of overdosage.

Premenopausal women who have experienced a remission following oophorectomy will usually relapse in somewhat under one year. When this occurs, a second remission may be obtained from adrenalectomy and possibly a third remission following hypophysectomy when the results of adrenalectomy have

dwindled. If a premenopausal woman has failed to derive benefit from oophorectomy a subsequent adrenalectomy is rarely of benefit. Hypophysectomy or the administration of estrogen are the treatments of choice in such a patient but they will only rarely produce a clinically worthwhile remission. Postmenopausal women who have enjoyed an adrenalectomy remission may obtain benefit from hypophysectomy following relapse from adrenalectomy. Most postmenopausal women will relapse from the benefits derived from adrenalectomy in somewhat under one year. If adrenalectomy has failed to improve the clinical situation hypophysectomy will upon rare occasion provide limited relief.

No definite knowledge is available about the mechanism of relapse from the benefits derived from the ablative procedures. We believe this to be the major problem in breast cancer today.

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Bed Rest for Heart Victims

Prolonged bed rest has been revived as a means of treating persons suffering persistently enlarged hearts.

Drs. George E. Burch and John J. Walsh of New Orleans wrote in the January 16 Journal of the American Medical Association that new drugs have been so successful in treating many heart ailments that "continued bed rest is greatly neglected, even in patients with rheumatic heart disease."

Preliminary findings showed that strict bed rest for periods up to one year produced "extremely promising results" among patients suffering nonrheumatic degeneration of the heart's muscle tissue and enlargement of the heart.

"Our concern has been principally directed to those typically young patients with severe, seemingly, irreversible cardiomegaly [enlarged heart], who follow a progessively downhill course, dying . . . usually within 2 to 12 months after the onset of illness."

"As the patient progresses along the spectrum of decreasing cardiac reserve to the stage of irreversible cardiac dilatation and insufficiency, he reaches a point at which he becomes unresponsive to any and all forms of therapy. It is our contention that the application of long-term bed rest not only delays in time the attainment of the point of no return but may, in selected cases, postpone this catastrophe indefinitely."

The authors based their report on five patients. Three patients' hearts returned to normal size and the other two showed remarkable improvement after prolonged bed rest.

The doctors admitted that their approach presents many problems, such as finding an adequate number of hospital beds. However, they suggested that facilities available for the treatment of tuberculosis might be used.

Dr. Burch and Dr. Walsh are associated with the Tulane Medical School, the Charity Hospital of Louisiana, and the Research Laboratory, U. S. Public Health Service Hospital.

Kaposi's Disease

SAUL KAY, M.D.
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This relatively rare tumor is described and three cases are presented.

THIS INTERESTING ENTITY is also known as Kaposi's sarcoma or idiopathic multiple hemorrhagic sarcoma. It is reported to be more frequent in the Hebrew and Italian males with an age incidence of 40 to 70 years.[1] Clinically there are purplish-red or bluish nodules varying from 1 mm. to 2 cm. in size, and appearing first on the hands and feet. The nodules may be firm, or spongy and soft. An associated feature is the development of elephantiasis and lymphedema of the involved extremity. Visceral lesions may be present with involvement of parenchymatous organs and lymph nodes. There is also a tendency to localize in the mucosa of the gastrointestinal and respiratory tract.

Usually the lesion progresses slowly, death occurring within 5 to 10 years. Fatalities may be due to gastrointestinal or pulmonary hemorrhages. Malignant lymphoma may also be responsible for the death of the patient. This latter lesion may be present either as a separate lesion in the skin and lymph nodes, or both disease entities may be found within the same area.[1]

Cox and Helwig[2] reported their experience with Kaposi's disease at the Armed Forces Institute of Pathology. The authors report 50 cases with details concerning the age incidence, distribution of lesions, follow-up, and visceral involvement. It was their opinion that the disease represents a neoplasm of the vascular system with multiple foci of origin, both cutaneous and visceral. The basic pattern of spindle cells with vascular slits persists for the most part, but in a few instances malignant transformation takes place, and the lesion is then capable of true metastasis.

From the Laboratory of Surgical Pathology, Medical College of Virginia.

REPORT OF CASES

*Case I**, H.T., a 51 year old white man, noticed a small lesion on his chin 3 weeks prior to visiting his private physician on 10/6/51. This had increased in size, and was associated with irritation and slight bleeding. According to the patient a tumor from the nose had been treated 20 years ago by means of roentgen therapy. The tumor was reported as an angiosarcoma, but we have not had an opportunity to review this slide. Physical examination showed an elevated, slightly ulcerated growth, approximately 1 cm. in diameter, in the center of the chin. This was excised, and the patient has been followed until the present time (1959) without evidence of recurrence.

Pathologic findings: Gross description: The specimen consisted of an ellipse of skin 2 x 0.7 cm. Bulging from the center was a soft lesion 1.2 cm. in diameter.

Microscopic description: The lesion occupied principally the dermis and caused widespread ulceration of the overlying epidermis. It was composed of interlacing bundles of spindle cells with elongated nuclei exhibiting abundant mitoses. (Fig. 1) These

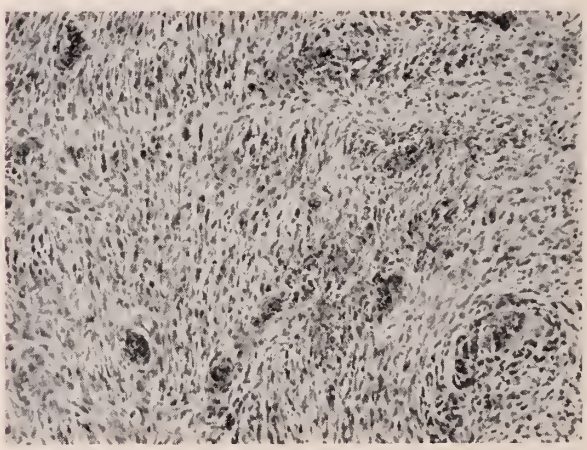


Fig. 1. (Case 1). Low power photomicrograph to show interlacing bundles of spindle cells with vascular slits and prominent blood vessels.

elements were associated with slit-like spaces which were often filled with red blood cells. (Fig. 2) There was considerable hemorrhage between the

*Courtesy of T. Duval Watts, M.D.

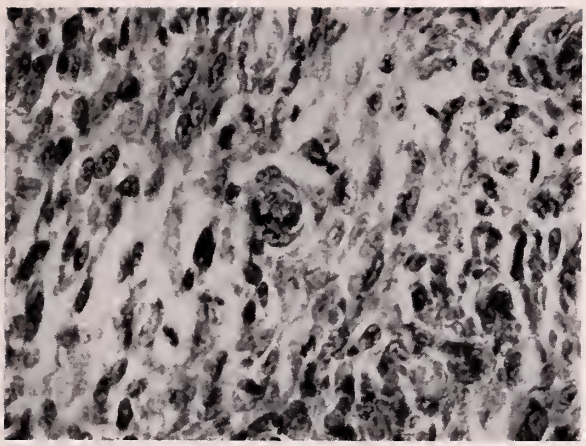


Fig. 2. (Case 1). High power view of Fig. 1 to show detail of cells.

tumor cells, and many congested blood vessels were present. In the depths, and extending into the subcutis, were isolated groups of neoplastic cells. In some instances these cells formed multinucleated groups, and some of these giant cells showed phagocytic activity.

*Case II***, G.S., a 58 year old white male, was admitted to Medical College of Virginia on 10/26/56 with the complaint of lumps on the back of his right leg of 3 weeks duration. The masses were hard and elevated, red, non-tender, and slightly movable. On the day of admission one of these nodules began to bleed profusely. On physical examination 7 to 10 firm, elevated masses were palpable behind the right knee. (Fig. 3) They appeared to be intradermal

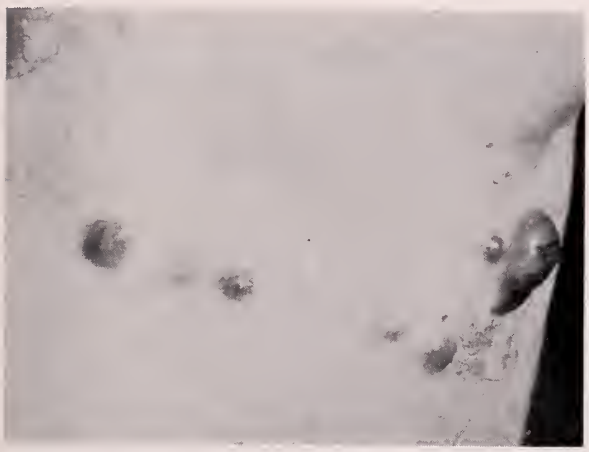


Fig. 3. (Case 2). Gross appearance of elevated nodules behind the knee.

and filled with blood. A clinical diagnosis of malignant melanoma was made and an excision biopsy was performed on the third hospital day. Following the pathological diagnosis of Kaposi's disease, a wide excision of the thigh and popliteal fossa was performed on 11/2/56. The patient was discharged on November 26th to be followed by his local physician.

The patient was readmitted on 6/20/59 with multiple recurrences in the right forearm, right lower extremity and chest. These were again excised the following day, and the patient was discharged on 6/24/59. At the time of this writing he is known to have a second recurrence, and is now undergoing a course of roentgen therapy.

Pathologic findings: Gross descriptions: Biopsy specimen 10/29/56. The specimen consisted of an ellipse of skin and subcutis 2 x 1.3 x 2.5 cm. In the center of the skin was a bluish-pink, moderately firm, rubbery nodule 0.7 cm. in diameter and elevated 0.4 cm. On sectioning the nodule was dark brown and confined to the dermis. A tiny 1 mm. satellite nodule was seen at the junction of corium and subcutis.

Excised specimen 11/2/56. There was a large ellipse of skin and subcutis 33 x 18 cm. Seven elevated, nodular, bluish masses were identified, the largest 2 cm. in diameter. These were confined to the skin which also showed a recent sutured surgical wound.

Excised specimen 6/22/59. The specimen consisted of 3 parts. One was an ellipse of skin and subcutis 2.5 x 1 cm. from the forearm. Two projecting blue-violet nodules, 0.4 and 0.3 cm., were present and seemed confined to the skin. Another similar specimen came from the right knee. It was 5.5 x 2 cm. with a cutaneous 0.6 cm. nodule. Finally there was an ellipse of skin and subcutis from the right leg. It was 1.5 x 0.8 cm., with a similar blue nodule 0.5 cm. in diameter.

Microscopic description: The microscopic features



Fig. 4. (Case 2). Low power photomicrograph to show lesion within the dermis. Note superficial resemblance to inflamed granulation tissue.

**Courtesy of Frank P. Coleman, M.D.

were similar in all instances. The nodules were located in the dermis and well circumscribed. (Fig. 4) They were composed of compact spindle cells, in general well oriented, but exhibiting numerous mitoses. (Fig. 5) Vascular slits between the spindle

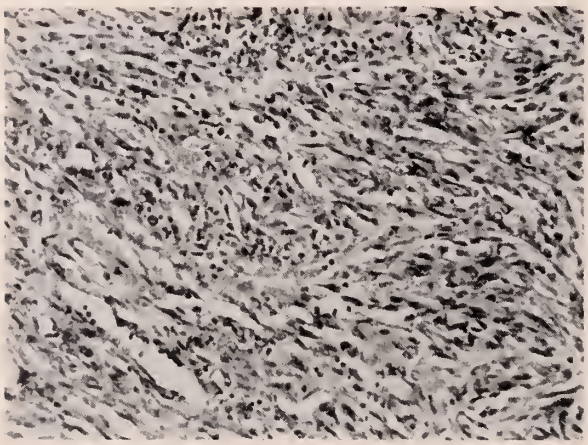


Fig. 5. (Case 2). Medium power view of lesion in the deeper dermis to show spindle cells and vascular slits.

elements were a prominent feature, and these were empty or filled with blood. (Fig. 6) In some areas

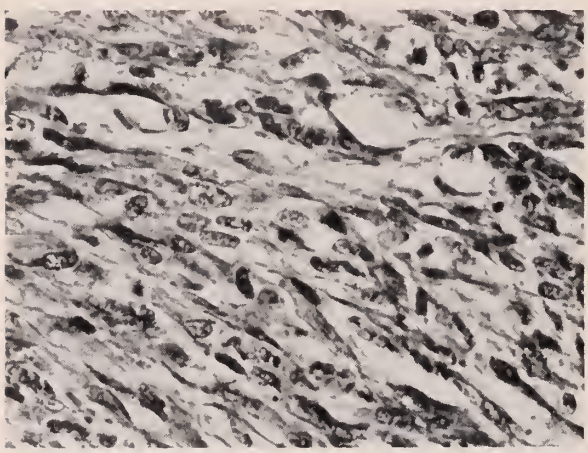


Fig. 6. (Case 2). High power view of Fig. 5.

there were well-defined endothelial-lined spaces so that granulation tissue was well simulated. The lesion extended almost up to the basal layer of the epidermis, but the latter was intact. Sprinklings of lymphocytes were scattered throughout.

Case III, E.G., a 49 year old colored male, first noted dysphagia and hemoptysis in March 1957. He was seen in the E.N.T. Clinic July 1957 where a tumor of the hypopharynx was discovered. Hospitalization was advised, but the patient did not reappear for hospital admission until 1/17/58. On indirect laryngoscopy the tumor was thought to arise in the vallecula of the tongue. A biopsy showed a poorly-differentiated squamous cell epithelioma, and surgery was advised. This was refused by the patient, and a course of radiation therapy was carried out.

While being followed in the Clinic an incidental mass was discovered on his chest. This was excised on 4/10/58, and submitted to the laboratory for study. Grossly it represented a Zenker-fixed piece of firm tissue 3.2 x 2.8 x 0.6 cm. It appeared to be composed of fibrous connective tissue. Microscopic section showed proliferating vascular channels and connective tissue. The cells which formed the channels were large, fibroblastic in appearance, and exhibited many mitoses. (Fig. 7) The channels were

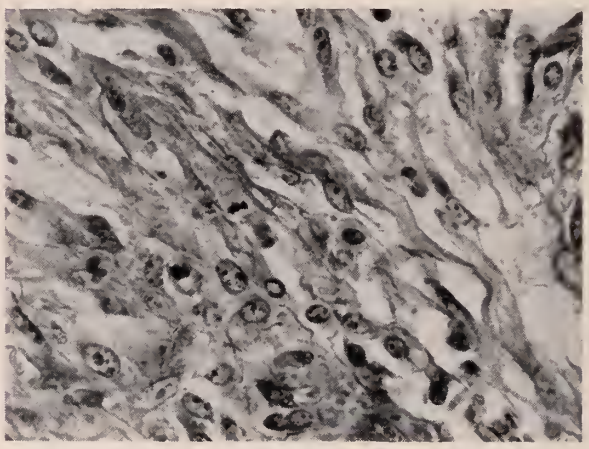


Fig. 7. (Case 3). High power photomicrograph to show spindle cells and split-like spaces. Note mitosis near center of field.

ill-defined but contained erythrocytes. The lesion had invaded the fat and was not circumscribed.

The patient is currently being followed in the tumor clinic. There is local recurrence of the epithelial tumor, and he has steadfastly refused surgical treatment.

DISCUSSION

These three cases represent our experience in the Laboratory of Surgical Pathology of Kaposi's disease in a 10 year period. As can therefore be readily appreciated, the malignant vascular tumors are relatively rare, if one includes all of them, namely Kaposi's disease, malignant hemangio-endothelioma and hemangiopericytoma.

During the same 10 year interval one malignant hemangio-endothelioma, and four hemangiopericytomas were studied. Of the latter, those in children were excluded. The hemangiopericytoma consists of proliferating capillary channels and/or venules, surrounded by broad sheets of cells intimately asso-

ciated with these vascular spaces. These cells, with the aid of silver stains, are found definitely outside the vessel walls, and proliferate in a more or less haphazard fashion. While superficially resembling the glomus tumor, the organoid feature of the latter is lacking. The hemangiopericytoma can be both benign or malignant, and the malignant varieties are found chiefly in the lower extremity and retroperitoneum. The malignant hemangio-endothelioma, also known as angiosarcoma, is a highly malignant tumor composed of sinuous vascular channels lined by anaplastic endothelial cells. Solid proliferations of tumor cells are often present, but the formation of endothelial-lined spaces may usually be found if sought for. The 5 year survival is seldom more than 10%.

The hallmark of Kaposi's disease, by contrast, is the presence of spindle cells associated with vascular slits. It is generally a multifocal lesion, and the 5 year survival is at least twice that of the malignant hemangio-endothelioma.

The long-term survival of Case I is not too unusual. If the lesion removed from the patient's nose 20 years prior to his present admission was also an example of Kaposi's disease, there is a survival of 28 years.

Case II represents the usual features of the disease. There is a 3 year survival, but multiple lesions were present, and at the time of this writing recurrence is known to exist. It might be pointed out that wide surgical excision was carried out in this case, which is a departure from the usual radiation therapy recommended. Whether the natural course of the disease was in any way altered by the surgical therapy is merely conjectural.

Case III is of too recent origin to form any valid conclusions. The vascular lesion is an incidental finding in a case of a squamous cell epithelioma, which by virtue of its location, is apt to cause the death of the patient prior to any effect of the vascular tumor. The latter has not recurred 1½ years following excision.

SUMMARY

1. Three cases of Kaposi's disease are presented.
2. The histologic criteria of Kaposi's disease are described and contrasted with malignant hemangio-endothelioma and hemangiopericytoma.

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Iproniazid Helps Alcoholics

The successful treatment of alcoholic depression with iproniazid phosphate (Marsilid), a drug with a tendency to irritate the liver, was reported in the Journal of the American Medical Association.

Dr. Julius C. Travis of the Adult Guidance Center, San Francisco Department of Public Health, reported on the use of the drug in 20 alcoholics in the February 27 Journal.

Because of its effect on the liver, Dr. Travis said, "the drug was, and apparently still is, considered dangerous for the alcoholic patient, who already may be a victim of liver disease." However, he prescribed the drug in cases where the patient was depressed to the state of possible suicide and had no history or current evidence of liver disease. Among the 20, all outpatients, six showed excellent results, six good results, four fair results, and four poor results. No side effects were observed. There were no cases of hepatitis or liver involvement. There were no suicides and no patients were sent to a hospital.

Dr. Travis concluded that iproniazid is "beneficial" to severely depressed alcoholics when the patient appears to be free from past or present liver trouble; the drug is given with pyridoxine to control adverse side effects; the risk of drug complications is much less than that of death or extensive hospitalization, and the patient is not drinking.

"It also seems to have helped these patients to refrain from continued use of alcohol as a cure for their depression. It is probable that the occurrence of suicide or hospitalization (and also just plain misery) has been reduced by the use of iproniazid. . ."

Psychotherapy alone in such cases is "inadequate."

Idiopathic Perforation of the Stomach in the Newborn

Report of a Case

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F. A. McCUE, M.D.
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A rare disease of the newborn is discussed and a case reported. The uniformly fatal outcome in untreated patients makes it important to keep this situation is mind.

IDIOPATHIC PERFORATION of the stomach in the newborn is relatively rare. Castleton and Hatch[1] reviewed the literature in 1957 and found forty cases reported and added three of their own. There is no doubt that gastric and duodenal ulcer may occur in the newborn and in some instances may perforate in the first few days of life. Other cases of perforation of the stomach have been reported, as due to passage of gastric tubes, and in a few instances to the administration of oxygen by a resuscitator or tube.

In 1943 Herbut[2] reported a congenital defect in the muscular layer of the gastric wall of an infant who died of spontaneous perforation of the stomach. He thought the perforation was a result of this. Castleton and Hatch feel that the following criteria should be fulfilled before a case is termed "idiopathic perforation of the stomach in the newborn":

(1) The patient must be a newborn infant, not over a few days old.
(2) There must be no evidence of peptic ulcer.
(3) There must be no evidence of trauma.
(4) There must be no evidence that perforation occurred as the result of intestinal obstruction, of a vascular lesion of the stomach, or significant cerebral lesions.

From the Department of Surgery and Pediatrics, Clinch Valley Clinic Hospital.

The condition is more common in boys than in girls, in a ratio of about 2.5:1. It is often associated with prematurity and other congenital defects. The infant is usually born with no difficulty and appears well for a few hours or days. Feeding difficulties occur; the patient may vomit and have fever. Our patient had small amounts of blood in the vomitus and stool. When the perforation occurs the abdomen rapidly becomes tense, distended, tympanitic and sometimes edematous. Roentgenographic examination reveals a large amount of free air in the abdomen. The perforation is most commonly found on the greater curvature of the stomach. If the condition is kept in mind it can be diagnosed without difficulty, especially if a roentgenograph is made of the abdomen. The only treatment is early operation and suture of the perforation. The mortality rate in treated cases is high. Castleton and Hatch state that of twenty-three infants operated upon, only eight survived and in untreated cases the mortality rate was 100%. One of the patients whom they reported had two recurrences of the perforation. Each time it was in a new location above the previous lesion. That patient died as a result of the third perforation.

REPORT OF CASE

Case #110,370; Clinch Valley Clinic Hospital.

The patient was a male child, one day old. The father stated that the child had been delivered on the way to another hospital on May 25, 1958. The mother had received no prenatal care, and there was no doctor in attendance at the time of delivery. The mother delivered the child spontaneously with no difficulty. He remained in the hospital about twelve hours and then was allowed to return home. He was seen here as an out-patient at 11:30 p.m. on May 26, 1958. The father stated that the child had vomited blood in small amounts on three different occa-

sions since birth. Body temperature was 98.6 degrees Fahrenheit. There was a small amount of fresh blood in the mouth. The heart, lungs and abdomen were reported to be normal. The baby was given 5 mgs. of Adrenosem and one ampule of Vitamin K, and was observed for two hours. There was no further bleeding or vomiting. The infant was allowed to return home about 1:10 a.m. on May 27, 1958. A few hours later he returned, and was admitted to the hospital. The father stated that the infant had continued to vomit small amounts of blood. Weight was 5 pounds, 10 ounces and the temperature was 100.2 degrees Fahrenheit. The baby appeared pale and quite ill. There was a small amount of dried blood in the corners of the mouth. The heart, lungs, and abdomen were essentially normal. The laboratory findings were as follows: The hemoglobin on admission was 16.1 grams. The following day it was 17.6 grams. A complete blood count was reported as 6.25 million R.B.C. and 16,700 W.B.C. with 10 myelocytes, 11 juveniles, 25 stab cells, 29 segmented, 24 lymphocytes and 1 eosinopihl. A specimen of urine was not obtained.

Adrenosem 5 mgs. was again prescribed with one-half cc. of Vitamin K. A transfusion of 100 c.c. of whole blood was given. Hesper C drams 1½ was prescribed every four hours in the formula. During the next twelve hours, the patient's condition remained good and he seemed to be progressing satisfactorily. There was no further vomiting although a small amount of blood was passed in a meconium stool. There was no diarrhea. The attending physician thought that the patient was making a satisfactory recovery. On the morning of May 28, 1958 his condition seemed further improved. Ten to twelve hours after this, about 9:00 p.m. on May 28, 1958, the infant suddenly became much worse and appeared to be in shock. The abdomen became markedly distended and tense and there was profuse vomiting. The attending physician saw the patient and felt that the distention was due to acute dilatation of the stomach. He passed a #16F rubber catheter and obtained a small amount of bloodstained milk curds. The infant seemed to be somewhat improved following this. On May 29, 1958, twelve hours later the abdomen was still markedly distended. The pulse was almost imperceptible and the rate was approximately 160 per minute. The patient's condition appeared to be moribund. It was obvious at this time that some catastrophe had been taken place within the abdomen. The surgical department was called in consultation and made the following note: "The child is moribund. The abdomen is markedly distended and tympanitic, with no audible peristalsis. There is no palpable mass. The rectal examination is essentially normal. A roentgenograph shows pneumoperitoneum indicating a perforated hollow viscus". (Fig. 1-a and 1-b)

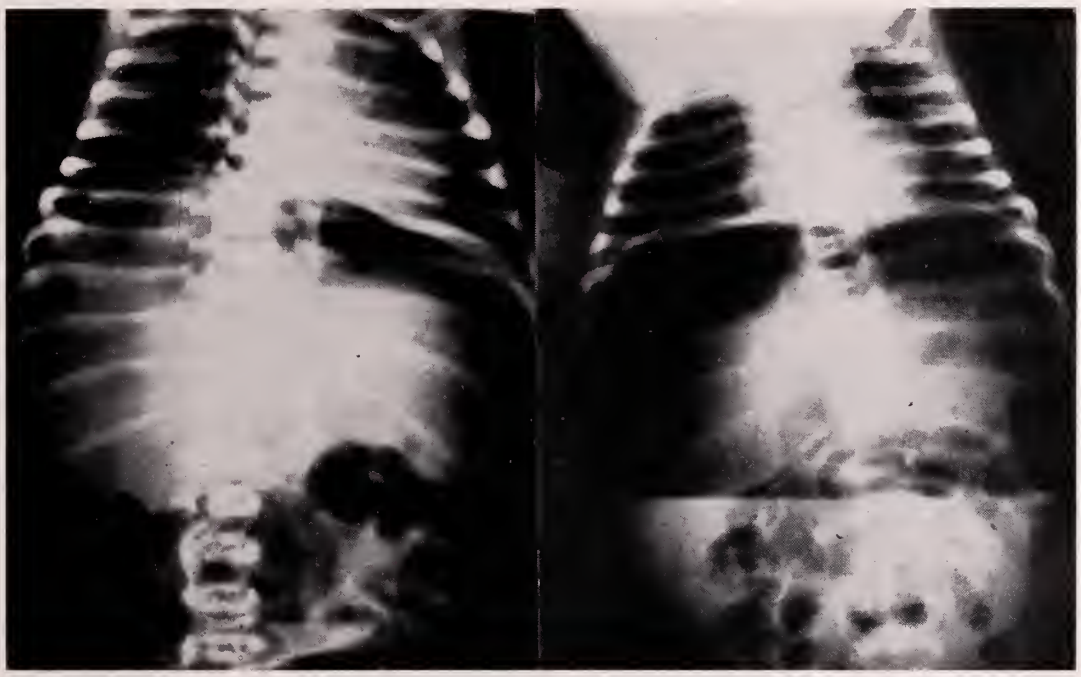


Fig. 1. 1-A—Pneumoperitoneum, supine. 1-B—Pneumoperitoneum, upright.

The peritoneal cavity was aspirated hoping that its condition would improve, so an operation could be performed. In spite of this and other supportive treatment such as blood transfusion and oxygen, the infant died. An autopsy was performed. The following is the autopsy report: "The body is that of a newborn infant, a few days old. Both feet are cyanotic due to suggillation. There is no external evidence of any particular disease or injury. The chest reveals the heart and lungs to be normal. The peritoneal cavity shows a large amount of free air and fluid with a generalized peritonitis. The liver, gallbladder, duodenum, jejunum, ileum, colon, spleen, pancreas, both kidneys, and urinary bladder appear normal. The entire greater curvature of the stomach is necrotic, and perforated throughout. Grossly there is no obvious cause for this condition. No other congenital defects were noted." The microscopic examination was reported as follows: "The serosa is overlain by necrotic material and leukocytes. Sections of the stomach show acute necrosis. The muscle is present in the region of the perforation. The pancreas shows no pathology."

COMMENT

This is the first case of idiopathic perforation of the stomach in the newborn which we have encountered. Had the diagnosis been made earlier and operation performed, the outcome might have been different; however, the autopsy finding of necrosis of the entire greater curvature of the stomach leads us to believe that this is the same type as the one in which Castleton and Hatch reported two recurrences, each time above the previous lesion. It is likely that had operation been performed, before the necrosis extended throughout the entire greater curvature, the perforation would have recurred above the suture line as it did in their case. It appears that if one of these patients is operated upon, the entire greater curvature of the stomach should be inverted even though the necrosis only involves a small area. This might prevent a recurrence. If this disease is kept in mind, we believe that it will be more readily recognized so that definitive surgery can be performed. This case fulfills the four criteria mentioned above which are necessary to make the diagnosis of idiopathic perforation of the stomach in the newborn.

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Fight Cold War

Dr. Charles B. Daugherty of Jeannette, Pa., is doing his bit to fight the cold war. Under his direction, American physicians have begun sending their old medical journals to physicians in foreign lands instead of letting them go to waste. The semi-retired otolaryngologist feels this will help deter the spread of communism.

"Doctors in some of these situations are the only literate persons in their communities and have great influence. If we can get an individual doctor to say 'America is good,' the whole community will say 'America is good.' "

Physicians in many parts of the world lack current medical literature, and since English has largely replaced German as the medical language of the world, American physicians with their vast amount of such literature are in a position to make a contribution to foreign medicine for the cost of remailing old journals, according to an article in the Medicine at Work section of the February 27 Journal of the American Medical Association.

After nine months, 65 American physicians are mailing journals to 83 of their counterparts overseas. Dr. Daugherty has access to the addresses of 250,000 foreign physicians and hopes to expand the program, called "Colleagues Everywhere." At present, he personally is handling requests for the addresses of foreign physicians.

Missed Abortion and Fibrinogenopenia

NORMAN S. PROPPER, M.D.
Wise, Virginia

This case report deals with fibrinogenopenia complicating missed abortion. The treatment of choice is discussed.

THE LOW INCIDENCE of missed abortion has caused confusion and doubt in the minds of many physicians as to its proper management. The problem is further complicated by the fact that the leading textbooks outline treatment programs varying from conservatism[1,2] to active surgical interference.[3,4] Traditionally, the therapy of this condition has been conservative. Recently there has been a sharp return to surgical evacuation of the uterus as the treatment of choice[5], primarily because of the fear of possible severe hemorrhage secondary to fibrinogenopenia. Since there are so few reports of missed abortion associated with these coagulation defects, it was felt that the following case history might add to the number of reported cases from which valid conclusions toward therapy could be drawn.

CASE REPORT

Mrs. C. M., a 39 year old white female whose last menstrual period was October 3, 1958, and whose expected date of confinement was July 10, 1959, was admitted to the Wise Memorial Hospital because of suspected death of the fetus. She was a para 13-0-13. Her history revealed that she had felt active fetal movements until March 25, 1959, or until about the fifth month of gestation. The referring physician stated that fetal heart sounds had not been heard for the previous two weeks. The remainder of the history was non-contributory except that she had complained for approximately one month of numbness and tingling of both hands, more so on the right. The size and position of the uterine fundus were consistent with a pregnancy of 20 weeks. Fetal heart sounds were not audible. The physical examination was, otherwise, within normal limits. Two frog tests (Rana Pipien) were positive. Fibrindex tests for plasma fibrinogen were repeatedly normal. The values for urea nitrogen, fasting blood sugar and serum protein were normal, as were the serological tests for syphilis. X-ray examination of the abdomen on three occasions revealed no evidence of fetal death. A complete blood count was essentially normal. The chorionic gonadotropin titre was less than 1000 international units per liter of urine.

COURSE

The patient remained in the hospital from the 9th of April, 1959, to the 18th of April, 1959, and at no time were fetal heart sounds heard. Continually a placental souffle could be heard. At the time of discharge her physician was asked to see her at weekly intervals, in regards to fetal heart sounds, uterine size, and the status of the Fibrindex test. In addition, she was to return in one month for further examination. If any complications occurred she was to be seen immediately. Her diagnosis at the time of discharge was pregnancy (uterine), not delivered, with probable fetal loss.

The patient returned home upon discharge and was followed by her family physician at weekly intervals. During these weekly visits she was checked for fetal heart sounds, uterine size and for fibrinogen levels by use of the Fibrindex tests. She got along perfectly well at home until the evening of the 27th of May 1959, when she came to the hospital with a referral from her attending physician because of bleeding.

SECOND HOSPITAL ADMISSION

At this time she presented herself with epistaxis, gross and microscopic hematuria. She was admitted with a diagnosis of missed abortion with fibrinogenopenia. On the evening of admission the Fibrindex test showed no evidence of fibrinogen nor did any clot form in freshly drawn blood. Two grams of fibrinogen were given that evening and after administration of this intravenously the blood clotted grossly in the tube and the Fibrindex values returned

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to normal. By the next morning freshly drawn blood again failed to clot and the Fibrindex test was abnormal. It was felt that the patient had fibrinogenopenia as a result of a dead fetus in utero and that delivery should be accomplished as soon as possible. Accordingly, the membranes were ruptured and induction was started and continued for two hours using 10 minims of Pitocin in 1000 cc. of 5% Dextrose in distilled water. When these measures failed it was felt that delivery should be accomplished immediately by hysterotomy. Therefore, two grams of fibrinogen were given intravenously after which the blood clotted normally and the Fibrindex test improved. She was taken to the operating room at approximately 1:15 p.m. A third gram of fibrinogen was given during the hysterotomy. A dead fetus and placenta were found and removed. The appearance of the dead fetus was consistent with the patient's history in regards to date of fetal demise. The uterine wound and the abdominal incision were closed in the usual manner. There was no evidence of unusual bleeding. Five hundred cc. of blood was given in the operating room. After the patient was returned to the ward it was noted that the uterus would not stay contracted and there was some bleeding. Accordingly, a second unit of blood and a fourth gram of fibrinogen were given, followed later in the afternoon by another two grams of fibrinogen. Shortly after this the blood continued to clot well. The uterus remained contracted and the patient's general condition was good.

During the first postoperative day and thereafter, the blood continued to clot grossly and the Fibrindex test remained normal. On the fourth postoperative day a third unit of blood was given and on the 8th postoperative day the hemoglobin was 9.5 grams with a hematocrit of 28 per cent. Iron and vitamin therapy was also instituted. On the fifth postoperative day the wound clips were removed and the skin incision was well healed.

She was discharged on the 9th postoperative day in good condition, and asked to return in two weeks for a follow-up examination.

Discharge Diagnosis:

1. Abortion, missed
   fibrinogenopenia
   epistaxis
   hematuria
2. Attempted induction of labor

Operative Procedures:

1. Hysterotomy
2. Tranfusion

DISCUSSION

Prior to the observation that fibrinogenopenia does sometimes occur after prolonged retention of a dead fetus, the treatment of missed abortion was conservative and consisted in reassuring the patient while waiting for the spontaneous evacuation of the uterine products. Now that it is known that the clotting mechanism may be altered in these circumstances, two different approaches to treatment are possible.

Some feel that an attempt should be made to induce labor as soon as the diagnosis of missed abortion has been made and if this fails a hysterotomy or curettage should be done.

Others feel that since only some patients with this condition develop defects in the clotting mechanism, treatment should be conservative until such time as abnormally low levels of fibrinogen develop. When this occurs fibrinogen should be given and an attempt made to induce labor by the intravenous use of Pitocin. If this fails a hysterotomy or curettage should be carried out immediately, along with the administration of adequate fibrinogen.

This case is an example of the latter method, which I believe is the management of choice. As long as the fibrinogen is replaced adequately there will be no unusual bleeding at the time of surgery. Once the products of conception are removed there will be no further danger of hemorrhage. The fibrinogen values can be determined by actual measurement of the plasma fibrinogen, Fibrindex tests or by observation of the blood clot.

SUMMARY

An interesting case of a missed abortion with fibrinogenopenia with hemorrhage is presented. The management is discussed and the change in methods of management as affected by fibrinogen defects is noted. The conservative method of management is advocated as long as the fibrinogen level is normal. When this becomes abnormal a planned approach of treatment is advocated. This consists of the administration of fibrinogen and immediate delivery.

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Prevent Food Poisoning

The causes of food poisoning—a particular hazard in warm weather—were outlined today in the February 27 Journal of the American Medical Association.

An understanding of the causes is helpful in preventing the illness. The main cause of food poisoning is bacteria which contaminates the food by multiplying or forming a poisonous substance. When eaten, the food produces acute illness of short duration.

Food poisoning caused by staphylococcic bacteria is "the most common type encountered in the United States," according to the Journal article. When the bacteria is present, only time and the correct temperature are needed to cause an outbreak. At a warm temperature food can become poisoned in five to seven hours in some cases. The foods usually involved in this type of poisoning are ham, cream-filled bakery goods, cheddar cheese, dry skim milk, poultry, and potato salad.

The symptoms of staphylococcic food poisoning—nausea, vomiting, diarrhea, acute prostration, and abdominal cramps—appear within a few hours after the food is consumed.

Another bacteria that can cause food poisoning is salmonella. "Salmonellae are abundant in nature and are found most commonly in the intestines of poultry and swine. They are present on the shell of eggs, and, when eggs are broken commercially, they find their way into frozen whole eggs, yolks, whites, and in dried egg products." The foods usually involved in salmonella poisoning are inadequately cooked egg products, poultry, or other foods. The symptoms it produces are abdominal pain, diarrhea, chills, fever, frequent vomiting, and prostration.

Several other types of food poisoning can be caused by starch foods inadequately refrigerated and by poultry and meat products cooked and left unrefrigerated at a warm temperature for several hours.

A rare and often fatal type of food poisoning is botulism.

"In the United States the majority of outbreaks of botulism are related to the consumption of inadequately processed home-canned vegetables of low-acid content such as string beans, beets, and other vegetables." The symptoms are difficulty in swallowing, double vision, difficulty in speech, and difficulty in respiration, followed by death from paralysis of the muscles of respiration.

The article was prepared by Dr. G. M. Dack, professor of microbiology and director of the Food Research Institute at the University of Chicago, as a report to the A.M.A. Council on Drugs.

THE TEETH

T. Stacy Lloyd, Jr., M.D.
Fredericksburg, Virginia

I

See the dentist's pretty teeth—gleaming teeth.
What a lovely grimace as you cower there beneath!
How they sparkle and they flicker as you wriggle where you sit
While the dentist works on yours with bits and burrs and sometimes grit—
And all the while assuring you that "This won't hurt a bit!"
How they glisten glitter glimmer
As their cusps are all a-shimmer
With the dazzling scintillation from the semicircle wreath
Of the twenty-eight or thirty flashing teeth
  Teeth, teeth, teeth, teeth, teeth, teeth—
Of the marvelous perfection of the teeth!

II

See the bill-collector's teeth—yellow teeth—
How they seem to come and find you out, whatever underneath.
And as you cringe and hem and haw and wheddle and then balk,
How they seem to want to leave their roots and gnaw you as you talk!
See their pyorrheic roots, their tobacco-colored coats,
As a grimy hand displays to you your promissory notes.
How you long to grasp each with a pincers, twist them where they sit,
Plunge them up and down and then extract them bit by bit,
Grind them to a powder in a mortar or a mill!
Try to forget your debts or that you ever owed a bill!
See how every lousy one is like a dagger out of sheath!
O' the dirty rotten miserable teeth
  Teeth, teeth, teeth, teeth, teeth, teeth—
O' the nauseating fetor of the teeth!

III

See the college classmate's teeth—snaggle teeth.
How their broken rotten remnants look like boulders on a heath!
And at first you are reminded of the happy days of yore
Till at length for old time's sake a loan of money they implore,
  Saying "Please, please, please—"
  With a deep asthmatic wheeze
And the bounder tells you that he will eventually bequeath
All his money to you—(no better than his teeth—
  Teeth, teeth, teeth, teeth, teeth, teeth—
His ingratiating whining scanty teeth.)

IV

See the neat prosthetic teef—false teef.
Their mathematical precision is somewhat beyond belief.
  But they slip click slip
  Twixt the tongue and lower lip
    And they crunch cluck crunch
    As they masticate their lunch.
  O how hopeless is the feeling
  When befouled with apple-peeling
    And how quickly they succumb
    On a wad of chewing-gum!
O to take them out at night gives a sense of vast relief
To the edentulous unfortunate with teef
  Teef, teef, teef, teef, teef, teef—
The poor down-trodden wearer of false teef!

(*With apologies to Edgar Allan Poe*)

Mental Health....

GILBERT J. RICH, Ph.D., M.D.

Bright Children Can Have Problems

In the last decade or two, there has been a tremendous amount of interest in the retarded child. Even before that, it was quite generally believed that most of the children who became involved in difficulties were dull or even retarded. Experience has shown that this is not the case. Emotional problems are the exclusive property of no age and of no level of intelligence. We are probably seeing more bright children today than we formerly did because their parents are awakening to the fact that they need help just as much as any others. The fact that these parents, usually intelligent people themselves, are bringing their children to a guidance clinic is evidence of the increasing acceptance which this work has within the community.

When Marvin was about nine years old, he was failing in his school work. In the classroom he dawdled, daydreamed and did not seem interested. Nor did he feel any encouragement when he was successful and did well. This was most remarkable in view of our finding that he had a mental age of 15 and an Intelligence Quotient of over 150. Here was a boy bright enough to be doing high school work who was failing in the middle grades. Why was this happening? What had gone wrong? Was he having the same sort of problems that children less bright than he have to face? On the other hand, was he facing some special problems that resulted from the fact that he was so bright? Did his superior intelligence make him able to overcome such difficulties?

The answer, of course, is that he was facing troubles of both sorts. The bright child is no more immune to the difficulties resulting from unstable home conditions or bad attitudes on the part of parents and other elders than is any other child. It is surprising how many children we see at the Roanoke Guidance Center who have superior intelligence with intelligence quotients ranging from 120 to 170. They come to us for a variety of emotional problems and behavior difficulties. Many of these are the same as seen in other children. These brilliant children have to face the same sort of difficulties that others do. They can have broken homes; they can have parents who do not understand; they can have rivalries with their brothers and sisters; they can develop hostilities which are beyond their control; and so on. In Marvin's family, for example, there were emotional difficulties between the parents which were definitely reflected in the behavior of this bright boy.

In addition to the problems of normal children, far too numerous to enumerate here, the bright child has certain difficulties which arise out of his intellectual ability. In Marvin's case, we saw that he was not doing well in school. He daydreamed and lacked interest. The reason for this was that his school work was not at all challenging to him. He had the ability to do much more difficult work, even that of four or five grades beyond where he was placed. Every year he was learning to loaf in school simply because he could "get by" without really exerting himself. There was nothing in school that really interested him. This is a problem that is frequently seen in bright children. The answer to it must be found primarily by the educator rather than by the psychiatrist and it is most pleasing to recognize that within the past few years many communities are facing it quite frankly.

Attendance at school by no means represents all of a child's life. His relationship with other children is most important. How do our bright children fare in this regard? Quite a number of them have difficulties. When Henry was referred to us in the latter years of grade school, he showed hostility and anger toward almost everyone. He had trouble in finding playmates. This was a boy of about the same intellectual level as Marvin. The activities of boys his own age seemed childish to him. He had scientific interests and did not care to play regular boys' games. He could not, however, mix with boys of his mental age because they were much too big for him and did not want to have such a "kid" around them. The result was that he had no one as his companion. He felt rejected by boys of his intellectual level and he himself rejected boys of his own age. He disliked both groups and wanted to fight with them. A long

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Approved for publication by Commissioner, Department of Mental Hygiene and Hospitals.

period of treatment was necessary before Henry's emotional difficulties could be straightened out.

At the age of 11, Harriett, a brilliant girl, was fearful and unhappy. She found herself bored with school and was converting some of her emotional problems into psychosomatic symptoms of illness. Like Henry, she was hostile and had trouble making friends. The basis of this difficulty came indirectly from her brightness. The parents recognized her ability, even though she, herself, did not. They put a great deal of pressure upon her to do well in everything so that they could be proud of her. They were, in fact, exploiting her ability. Fortunately, they were bright people who were soon able to understand the situation and to improve it. A situation like this, in which parents put so much pressure upon a bright child that he rebels against it, is frequently seen.

It was not too many years ago that it was thought that bright people and, more especially, bright children were emotionally unstable. They were expected to have problems just because of this instability. They were thought more likely to be "cranks" than other people. As our work in mental hygiene has gone on and as we have seen increasing numbers of bright children and bright adults, there has been no evidence that this is the case. It is not the inherent intelligence of a child that causes him to have problems but the fact that this intelligence brings him into conflict with the world in which he lives. He has to deal with people who, being themselves mediocre, are challenged by anyone brighter than themselves. He has to attend a school which is often so crowded that the teacher has no time to give him the special attention which he needs. A bright person is, after all, just as far from the average as is a dull person; a genius is just as abnormal as an idiot. The genius, of course, is much more useful to society than the idiot, but he is usually less of a nuisance and fails to be the "squeaking wheel that gets the grease". Is it not time that we aroused ourselves to a definite understanding of these human resources and gave them a better deal? Is it not time that we adults stopped looking down on them as "eggheads" and that we taught our children not to push them aside because they are "brains"?

Help for the emotionally disturbed bright child must come from many sources. As has just been indicated, it is partly a task of the community. Bright children can only develop normally when they are truly accepted and not marked as being different from others because of their intelligence. It is only as we, ourselves, overcome our jealousy of bright people that our children will overcome their jealousy of bright children and treat them as though they were not outsiders and different from others. It is also the task of the schools to provide for bright children and it is most encouraging to see that they are now recognizing their part in it.

The interest in children of superior attainment is really something quite recent. We have in America suddenly discovered that we are not utilizing our brain power to the best advantage and that this failure is causing us to fall behind in what amounts to an international contest. We have finally decided that we must help develop this brain power as rapidly as possible and found that emotional problems play an important role. It is here that the mental health clinic can be of service.

One might naturally wonder whether the problems of the bright child are more easily solved than those of the normal or dull youngster. The answer is not clear. Often, both in early and in later childhood, brilliance merely complicates the problem and does not really help treatment, simply because the child is not mature enough to direct his intelligence upon social and personal problems. It is usually only in adolescence that the bright youngster moves ahead more rapidly. This is well illustrated in the case of John. This bright boy came to us when he was starting high school both because of his emotional difficulties and because of his involvement in a theft. He was having the usual trouble that such boys have in finding adequate companions since he had scientific interests far beyond those of the boys of his age, and his class. He soon realized what a mistake he had made in trying to gain status for himself among his classmates by his delinquent acts. He was not only intelligent enough, but at this age he was also mature enough to use his ability to an understanding of himself and of his relations to others. He made rapid progress during a relatively brief course of treatment, which was interrupted when his family moved to another city. He has been seen a few times since then. The last was just as he was ready to enter college; he was then happy, getting along nicely and there have been no repetitions of his delinquency.

The child guidance or mental health clinic is concerned with helping these members of the community. It endeavors to be a true resource available to all, not limited to any class or group in the population that it serves. It sees and helps families from every type of occupation, from every social and financial level and, more particularly, from every

level of intelligence. The physician should never hesitate to refer a boy or girl to the clinic because he or she is bright. On the contrary, this should be an additional reason for early referral. The bright child is worth salvaging and should receive attention as promptly as possible.

Home Not Symbol of Safety

The home can no longer qualify as the symbol of safety and security traditionally ascribed to it, according to the Journal of the American Medical Association. The growing hazards attached to living in the modern home make it a decidedly unsafe place (an editorial in the February 6 Journal).

"Current accident records, especially involving children but by no means excluding adults, indicate the necessity for revised thinking. There is a demand on health and safety officials, the medical profession, educators, and enlightened public leaders to render progress toward easier living as safe as possible."

During the past 12 months, the editorial said, a great amount of publicity has been given to plastic bag suffocations, lead poisonings due to fumes from wooden battery cases burned for fuel, and carbon monoxide poisonings due to inadequate ventilation of space heaters, particularly in trailers.

However, the Journal said, many hazards have appeared without fanfare, incidental to the introduction of labor-saving machinery and the application of modern chemistry to home cleaning and sanitation problems. Detergents, chemical cleansers, and weed killers, all potential poisoners, were cited as examples.

"The dangers involved in increased use of potent drugs, particularly self-medication with barbiturates and other sleeping tablets, are increasing rather than diminishing despite warnings by medical and public health authorities."

"Do-it-yourself equipment, particularly power tools, creates additional dangers, especially in the hands of the unskillful.

"The hazard of carbon monoxide poisoning is not limited to trailers and shack homes. Even the modern heating system, if improperly vented, may feed back carbon monoxide into the home, as may gasoline motors left running unattended in closed, attached garages.

"Despite slowly declining home accident rates, a new look at safety in the home is certainly indicated. Probably the most important and the most difficult step is the alerting of an indifferent public without creating needless panic and unwarranted fears."

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

The Profession's Role

The following article is a condensation of a report of the Committee on Medical Economics of the Medical Society of the County of New York. This report and its recommendations were adopted by that Society at its business meeting held on November 23, 1959.*

To suggest a remedy for the rising costs that plague hospital care insurance it is necessary to obtain a clear, factual and objective picture of the elements which contribute to the increase. Two factors are at work.

(1) The general inflationary trend in the entire national economy which, in hospitals, results in increased costs of food, drugs, equipment and supplies, increases in staff salaries, etc. . . .

(2) In a second area the medical profession can make a direct contribution in aiding insurance carriers—or saying the same thing—aid the patient in holding the line on the premiums paid for such hospital insurance. We refer to the important problem of the proper utilization of hospital insurance plans. . . .

There is a lamentable lack of criteria for the proper utilization of hospital care insurance plans because hard and fast judgment can vary so much in the individual case. In many instances, neither doctors nor patients are amenable to accurate classification. Yet it is in this area between clear cut black or white decisions that the main difficulty lies. This is the "grey" area of decision which can mean an extra day or two in the hospital, an extra laboratory examination or extra medication.

It is here that major savings in costs can and should be effected. But remember this. These are not necessarily "abuses" of the hospital or hospital insurance plan but rather the physician's natural concern for his primary responsibility, the care of his patient. We reemphasize that this responsibility of the physician is legal as well as moral, as a glance at the number of malpractice suits against doctors and the increase in the premiums for malpractice and liability insurance attest.

There are other factors which exert pressure upon a physician in determining both the frequency of hospital admissions and the duration of the patient's stay within the hospital. One is the patient's insistence upon receiving more than his hospitalization coverage should permit. . . .

There is admittedly outright abuse of these plans by some patients and certain doctors. We believe that these instances are numerically few and that they contribute relatively little to increasing premiums. They must be eliminated entirely, however, for practical economic reasons and in the interest of the moral standing of the medical profession. Their elimination will also help to decrease the amount spent by the insurance companies to police their plans, which is entirely too much. In principle, the medical profession must accept part of the responsibility of policing the plans.

One effective way would be to set up committees at the hospital level to consider those cases of potential abuse that the insurance carrier might question. The committee should be composed entirely of staff physicians or preponderantly of physicians with some member of the lay executive staff of the hospital. They would be a self disciplining mechanism analogous to the tissue committees that operate in most hospitals. Within the confines of its own hospital, each committee would have the power of moral suasion in backing up its decisions. In the extreme it could have the possibility of revocation of staff privileges. . . .

There is probably no immediate way of eliminating the small "excesses" that are due to variations in judgment. Since, in the aggregate, they comprise the major problem facing the carriers today, some long range planning is in order. In our opinion, there must be a massive and continuing educational program directed at both the doctors and the public. Doctors must be made to understand the vital importance of small savings to the viability of hospitalization insurance plans. They must be made to understand that while there is to be no attempt to dictate to them in the care of their patients, it is urgent that they eliminate what they can by "trimming the fat" off hospitalizations and in-hospital procedures. There is need also for an educational

* "The role of the Medical Profession in Reducing Costs of Hospital Care", New York Medicine 25:974, December 5, 1959.

program to doctors emphasizing that insurance payments are not a "jackpot" payoff to either patient, hospital or physician. The medical societies are probably best equipped to handle this phase of the campaign with the cooperation of the insurance industry to provide mailing literature.

The second phase of the educational program, directed at the public, should be undertaken by the insurance carriers. The insured public must be made aware that they are not "losing out" if they do not become sick so that they take advantage of their insurance plan. They must be taught that no matter how long they carry insurance and how little they use it, they are not entitled to services that are not provided for in the contract. . . .

Another field that should be thoroughly explored is the organization of hospitals and whether, on a long range basis, present organization might not be modified. Present practice provides the same care for a chronically ill patient or a convalescing patient as it does for one acutely ill. This represents some waste, for convalescing patients require much less hospital care. . . . If these convalescing patients could be segregated from the acute division of the hospital, it would result in considerable savings in personnel. It should be possible for a doctor to transfer his patient from the acute to the convalescent ward of the hospital when his condition warrants and still have the patient provided with necessary services and have him available for examination and treatment. The savings of such a system might well be sufficient to warrant reimbursement to the hospital at a lower rate for care in a convalescent ward. The system might also allow better utilization of nurses who are currently in such short supply. . . .

Recommendations:

(1) County and state medical societies should use all their channels of communications to the profession to bring home to physicians their stake in and their role in preserving voluntary hospitalization insurance. In addition to the inevitable moralizing there should be concrete suggestions made to physicians on the basis of definite criteria to be discussed below. It is suggested that the public relations committee of each county medical society should handle this compaign unless there is an established committee for professional relations or professional education.

(2) County and state medical societies through their public relations committees should cooperate with hospital plan carriers in an intensive publicity campaign along the lines indicated above. The campaign to the public should emphasize a subject usually avoided by the carriers; that there are restrictions on the insurance they sell and that these restrictions will be enforced.

(3) Joint committees should be established, at whatever level is best suited to the community, to consist of representatives of the medical society, hospitalization and health insurance carriers and both voluntary and proprietary hospitals through their respective organizations. These committees should meet regularly to explore the following questions: (a) The establishment of Admission, Discharge and Conduct Committees at hospitals. Their composition, aims and specific function. (b) Evaluation of hospital facilities and organization with the object of the eventual recognition of different grades of care with different rates of payment to the hospital. (c) Evaluation of laboratory and other "ancillary" facilities in hospital, so that patients need not be kept in longer than necessary while waiting for laboratory, x-ray or physio-therapeutic services. (d) Investigation of the possibility of rendering certain services on an out-patient rather than an in-hospital basis. This applies particularly to the field of minor surgery. (e) Elaborate criteria applying to proper utilization so that individual physicians and hospital committees may have a yardstick for comparison.

(4) It would be well for the medical societies and the insurance carriers to consider whether or not the time-honored exclusion of diagnostic services might not be re-evaluated in the light of savings effected by tighter operations.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Infectious Hepatitis

Jaundice in the epidemic form has been recorded since the second century B.C., more than two thousand years ago. Numerous epidemics have been reported in many populations since the 17th century. It has been particularly evident in wars throughout the world.

It was recognized early that two types of jaundice exist; one resulted in a high and the other in a low mortality. The concept of "catarrhal jaundice" was introduced in the 19th century and the opinion was gradually formed that epidemic and catarrhal jaundice were the same disease. The latter term was usually applied to isolated cases. Evidence began to point to the fact that the jaundice was due to disease of the liver itself, rather than to plugging of the bile ducts. As early as 1918 a viral etiology was suggested. Most of our present knowledge of infectious hepatitis has been obtained through study of human volunteers.

The following etiologic classification of viral hepatitis is the one now generally recommended:

Virus A is the agent that results in infectious or epidemic hepatitis. The incubation period is from 10 to 50 days, with an average of about 30 days. The virus is present in the feces and blood in the acute stage and in the blood during the incubation period. The feces and blood are infectious when administered by oral and parenteral routes.

Virus B accounts for the illness formerly called homologous serum hepatitis, transfusion jaundice, postvaccinal jaundice, postinoculation jaundice, and delayed arseno-therapy jaundice. The incubation period is from 60 to 160 days. The virus has been demonstrated in the blood but not in the feces, urine, or pharyngeal secretions. Blood and blood fractions are infectious to others only when administered parenterally.

The fact that infectious hepatitis is endemic in Virginia is undeniable. Usually it is divided about equally between rural and urban areas but in Virginia it is reported most frequently from rural or semi-rural areas. The seasonal incidence is highest in the autumn and early winter.

The clinical picture varies in different age groups. In childhood the course of the disease is far milder and of shorter duration; it may be so mild and so transient as to escape notice entirely. The course in adults is more characteristic than in children and the diagnosis can usually be made on the basis of the history and physical findings. In adults the disease may be divided into three stages, the prodromal or preicteric, the icteric, and the convalescent.

The preicteric phase lasts from one to 21 days, usually a week. The onset may be gradual or sudden. There is headache, lassitude, fatigue, muscle aching in the back and extremities, loss of appetite, nausea with or without vomiting, and abdominal discomfort located in the epigastric region or in the right upper quadrant. The fever may be accompanied by chilly sensations or a frank chill. Tenderness of the liver may be elicited by percussion. Leucopenia is characteristic in the preicteric state. Toward the end of this phase the urine usually becomes brownish and the stools may become grayish or whitish in color. About this time the patient feels better for a day or two.

The icteric phase then develops and the patient is jaundiced, there is a return of the gastro-intestinal symptoms with loss of appetite chiefly and nausea, often with vomiting. Even in a mild case the patient will lose 10 or more pounds. The liver is usually palpable and may be very tender. The spleen, also, may be palpable and tender. Spider angiomata occur frequently and disappear with clinical improvement. This phase lasts from one to 10 weeks, usually about four weeks in the young adult.

Just after the jaundice reaches its maximum intensity the patient usually starts to feel better and his appetite begins to return. Convalescence is commonly prolonged in adults. They continue to become easily fatigued, they complain of lack of appetite and lassitude for several weeks after jaundice has entirely disappeared and liver function tests have become normal.

The disease in children is similar to that in adults but usually it is milder. Entirely asymptomatic cases are common. The onset is often abrupt and the

temperature may reach 102°F. to 104°F. Irritability and drowsiness are common symptoms but loss of appetite is not as prominent as in adults. Vomiting and abdominal pain may occur. Some children have symptoms referable only to the upper respiratory tract. Convalescence is generally very rapid in children and they often feel entirely well before the jaundice disappears.

The incidence of anicteric viral infection varies with the age group involved, it is more frequent in children and the particular strain of virus plays a part. The symptoms resemble those of the icteric form but are milder. In children the symptoms may be predominantly those of a respiratory or gastrointestinal infection. The physical findings are similar to the icteric form but the jaundice is absent. Occasionally the physical signs may be absent but liver dysfunction can often be proved by certain laboratory tests.

The serum transaminase level becomes elevated four to six days prior to the onset of symptoms and serves as a very sensitive, though nonspecific, index during the preicteric phase and in anicteric cases. The bromsulfalein excretion test becomes abnormal in the preicteric phase and remains elevated throughout the acute stage. Bilirubin will appear in the urine before blood levels become significantly elevated. Urobilinogen appears in the urine in increased amounts and may be the only indication of the onset of hepatitis. Positive cephalin flocculation and thymol turbidity tests appear during the second and third weeks of illness in at least 80 percent of patients with viral hepatitis. Serum bilirubin determinations are helpful in the icteric phase. The icteric index is useful in following the course of the jaundice.

The treatment of viral hepatitis is symptomatic and nonspecific. Adequate rest and adequate caloric intake are most important. The patient should remain flat in bed as much as possible since it has been shown that sitting up in bed decreases hepatic blood flow. The period of convalescence may be prolonged and relapses may occur if the patient does not avoid fatigue and take sufficient rest. The diet should be well balanced, relatively high in protein and not restricted in calories or fat. Fat, particularly dairy fat, is usually well tolerated and increases the palatability and the total caloric content of the diet. When there is lethargy or neurologic manifestations suggesting impending coma are present, the protein should be reduced temporarily. Neomycin and other antibiotics appear to be of benefit in hepatic coma. Vitamin K may be beneficial when the plasma prothrombin level is seriously impaired and should be given parenterally. Most drugs are either detoxified or excreted in the liver and it is important not to give drugs just because "they might help"; they might actually prove to be harmful. Opiates and barbiturates are not well tolerated by hepatitis patients. In cases of severe hepatitis or in patients who are comatose, cortisone or similar steroids may be helpful. Immune globulin is of no value in treatment though it is helpful in prevention of hepatitis.

To prevent the spread of the disease good community sanitation and personal hygiene should be observed. Procedures that interrupt the fecal-oral route of transmission should be carried out. Measures directed to fly abatement should be undertaken. Food receptacles should be sterilized, infected food handlers should be eliminated, and every precaution should be taken to prevent the contamination of food, water, and milk supplies. The protective dose of gamma globulin to prevent the development of infectious hepatitis is 0.01 cc per pound of body weight. For practical purposes, 1.0 cc is usually given to children under 100 pounds and 2.0 cc to older children and adults.

Serum hepatitis is caused by a virus, Virus B, which is distinct from that, Virus A, causing infectious hepatitis. One attack of infectious hepatitis apparently confers immunity but does not protect the patient from contracting serum hepatitis. The incubation period of serum hepatitis is long and the virus is present in the circulating blood during this stage as well as in the active stage of the disease. A history of having received a blood transfusion two to six months previously is suggestive of this type of illness. A group of cases among patients in a clinic where parenteral therapy is employed would arouse suspicion. Gamma globulin does not prevent the development of serum hepatitis. The ability of Virus B to cross the placental barrier and cause disease in the newborn is well established but there is no evidence that Virus A causes clinical illness in the fetus or congenital disease in the newborn.

There is a hazard in faulty technique in giving injections, collecting blood, or carrying out procedures involving puncture of the skin with an instrument. Viral hepatitis has been reported following intravenous injections, intramuscular injections, subcutaneous injections, intradermal injections, and withdrawal of blood by venipuncture. It has been transmitted by dental procedures and following use of tattoo needles. Adequate sterilization and good technique can eliminate this hazard. Sterilizing in

dry heat at 160°C. for one hour, autoclaving at 15 pounds pressure for 30 minutes, or boiling for 20 to 30 minutes after through cleansing are adequate. When a multiple-dose-per-syringe technique is used, hepatitis has been reported following injections. This has been found when the same syringe has been used for five injections, though a fresh needle was used for each injection. Several factors influence the attack rate from such a source:

1. The number of doses per syringe.
2. The number of injections received by each person when this technique is used.
3. The number of carriers of both viruses in the population involved.
4. The susceptibility of this population.

The advisability of taking such a risk is questioned when even one case which might have been prevented may follow such a procedure.

In the majority of cases infectious hepatitis is a mild disease and recovery without relapse is usual. Occasionally the acute form of the disease may progress to chronic liver disease. Only a very small number of cases develop a form which may lead to death.

Number of Cases of Infectious Hepatitis Reported in Virginia 1954-1959 Inclusive

Year	Number of Cases
1954	3550
1955	1056
1956	484
1957	426
1958	286
1959	502

The booklet, Viral Hepatitis, Clinical and Public Health Aspects, USPHS, Department of Health, Education, and Welfare, has been largely used as a reference.

Monthly Report of Bureau of Communicable Disease Control

	Feb. 1960	Feb. 1959	Jan.-Feb. 1960	Jan.-Feb. 1959
Brucellosis	0	2	2	4
Diphtheria	2	0	6	2
Hepatitis (Infectious)	78	86	163	112
Measles	1090	1539	1729	2880
Meningococcal Infections	5	11	12	18
Aseptic Meningitis	3	—	6	—
Poliomyelitis	0	0	0	1
Rabies (In Animals)	21	15	47	31
Rocky Mt. Spotted Fever	0	1	0	1
Streptococcal Infections	494	1105	1357	2119
Tularemia	1	1	20	5
Typhoid	2	1	3	2

Current Currents

FORAND BILL: These are the days of decision. As this issue of Current Currents goes to press, the House Ways and Mean Committee is beginning to hold executive sessions on Social Security amendments—meaning the Forand Bill. As you know, this is the Bill which would expand the Social Security system to include surgical and hospital benefits for recipients of Social Security payments.

It is becoming quite clear that numbers are important in this campaign. Congressmen seeking to contain the Forand Bill are being flooded with letters from those favoring such legislation. This is an election year and it is absolutely necessary for opponents of the Bill to make their opposition known.

HEALTH INSURANCE AFTER 65: According to the Health Insurance Institute, significant advances have been made in extending the protection of health insurance to those persons 65 years of age and over. In 1952, only 26 per cent of those in the older age group were covered by some form of health insurance. Today, more than 43 per cent of this group, well over six million persons, are protected. The number of those insured is reported to be rising more rapidly than in any other age group.

This growth reflects the steady expansion of the voluntary health insurance movement which is today providing a cushion against the financial impact of illness for nearly three out of four persons. It also reflects the intense efforts of insurance companies and the Blue Cross-Blue Shield Plans to broaden the availability and improve the quality of coverage for our senior citizens.

AMEF: The American Medical Education Foundation reports that contributions in 1959 totaled $1,195,824.79—an increase of $75,780.10 over 1958. These figures are, in themselves, a tribute to every individual who has given of his time to achieve this much needed financial aid for medical education.

In Virginia, 268 physicians made direct contributions to AMEF—compared to 230 in 1958. These physicians contributed $11,302.50—an increase of almost $3,000. This battle by the nation's physicians to prevent government encroachment in the field of medical education is winning the respect of the entire country.

1960 ANNUAL MEETING
VIRGINIA BEACH—OCTOBER 9-12

MEDICARE: Recent testimony before a Senate Committee by Brig. Gen. Floyd L. Wergeland, Executive Director of the Medicare Program, has disclosed that $71.6 million will be needed to operate the Program in 1960-61. Some very interesting facts were reported by General Wergeland and the highlights, as published in the Washington Report on the Medical Sciences, follow:

About 9 per cent of claims processed by Medicare in a given month represent care completed during that month; 32 per cent are for care given in preceding two months; 65 per cent, three months; 80 per cent, four months. Claims are still being received, and paid, for care completed nearly three years ago.

In program's first three years (through December, 1959), $212.6 million was expended by Medicare: 49.3 per cent for physicians' claims, 48.5 per cent for hospital care, and 2.2 per cent administrative costs. Air Force dependents accounted for $84.3 million; Navy for $68.2 million; Army, $55.6 million, and Public Health Service the remainder.

In fiscal year beginning next July 1, dependent strength will be an estimated 3,738,-700, an increase of nearly 100,000 over current year. Average daily patient load in civilian hospitals will be around 3,530, compared with 3,219 this year.

The cost per patient day in civilian facilities averages $52.65 this year and it will rise to $55.30 in next fiscal year, according to budget calculations. Last year the figure was $50.06.

JAYCEES AND HEALTH: The Medical Advisory Committee to the United States Junior Chamber of Commerce recently met in Tulsa to discuss community health activities. The Committee, of which Dr. John Wyatt Davis, Jr., Lynchburg, is a member, recommended the following projects: Accidental Poisoning, Alcoholism, Care of the Aged, Family Health Maintenance, Fluoridation, Health Careers, Juvenile Protection, Immunization, Rehabilitation of the Physically Handicapped, and Volunteer Services in Health Facilities.

The Jaycees are doing a wonderful job with various community health projects and the Committee has urged all physicians to assist whenever possible.

SPECIAL MEETING OF COUNCIL: One of the very few special meetings of the Council of The Medical Society of Virginia was held in Richmond on February 28. The meeting was called to consider 54 pieces of legislation which had been introduced in the General Assembly. It is difficult to recall when so many bills with medical implications had been considered by the Assembly.

The Medical Society of Virginia . . . .

Council Minutes

A meeting of the Council of The Medical Society of Virginia was called to order by Dr. Allen Barker, President, at 1:00 P.M. on February 4, 1960. Attending were Dr. Walter P. Adams, Dr. Robert S. Hutcheson, Dr. Russell Buxton, Dr. Harry J. Warthen, Dr. Mack I. Shanholtz, Dr. John T. T. Hundley, Dr. Fletcher J. Wright, Jr., Dr. Paul Hogg, Dr. K. K. Wallace, Dr. Thomas W. Murrell, Jr., Dr. William N. Thompson, Dr. Alexander McCausland, Dr. Dennis P. McCarty, Dr. W. Fredric Delp, and Dr. Richard E. Palmer. Also in attendance were Dr. W. Linwood Ball, Delegate to the AMA, Dr. Fletcher Woodward, Chairman, Committee on Traffic Safety, and Mr. John B. Duval and Mr. William Miller, Attorneys for the Society.

The President introduced Mr. Richard Velz, Director of Public Relations, A. H. Robins Company, who acquainted the Council with a proposed physicians' award for community service. It was learned that the Robins Company has, for the past several years, made similar awards available to pharmacists, and the project has been unusually well received. It was believed that a physicians' award would do much to improve the doctor image as far as the public is concerned, and also serve to honor a deserving individual.

It was moved and seconded that the President appoint a special committee to meet with representatives of the Robins Company and discuss the proposed award in detail. The Committee would make known its recommendations at the next meeting of the Council. The motion was adopted.

Dr. Woodward was then introduced and requested to acquaint the Council with his Committee's recommendations on traffic safety. Dr. Woodward referred to the report published in the September issue of the Virginia Medical Monthly, and covered the various recommendations in detail. There were several matters which received particular attention, including the matter of an implied consent law, the value of an alcohol breath test, establishment of a .10% blood alcohol level, the need for mandatory laws for each degree of intoxication, and the advantages of a demerit point system. It was also Dr. Woodward's feeling that the Society could perform a real service by urging component medical societies to set up medical referral committees staffed by rotating groups of physicians.

After considerable discussion, a motion was introduced approving the .10% blood alcohol level, and the proposed implied consent law. The motion was seconded, and, after considerable discussion, adopted.

Next to be considered was the request from the Woman's Auxiliary that $250 be appropriated to help defray the cost of Auxiliary activities during the 1960 annual meeting at Virginia Beach. This amount would be in addition to the $100 regularly included in the annual budget. The Council was informed that the Auxiliary always returns any of the money not used during the meeting. Dr. Wallace outlined some of the plans already made by the Auxiliary—including visits to the Oceana Naval Air Station, tour of an aircraft carrier, visits to famous landmarks and homes, and many others. It was moved and adopted that the Society appropriate an amount not to exceed $250 for the use of the Auxiliary.

Council was then advised that the U. S. General Accounting Office had recently released a report concerning the Medicare Program in Virginia. Although the report complimented the Fiscal Administrator for a very good job, the Society was criticized for not seeking a reduction in its Medicare fee schedule, and for not sufficiently impressing its members with the necessity of charging their usual fees when those fees are lower than the maximum schedule. It was reported that the General Accounting Office was under the impression the fee schedule was originally negotiated with the Arlington, Alexandria and Fairfax areas in mind. This was a mistake, since the Northern Virginia area has, from the very beginning of the Program, been covered by the contract negotiated by the Medical Society of the District of Columbia. It was further learned that Virginia's contract was negotiated with the Norfolk, Portsmouth and Newport News area in mind. Brought out also was the fact that when the schedule was renegotiated approximately one year ago, the schedule was not increased, and fees for certain procedures were lowered.

Council was also advised that General Wergeland, Executive Director of the Medicare Program, had been written and provided with excerpts from various publications which had called attention to the im-

portance of charging the usual lower fee.

The Executive Secretary was directed to write a follow up letter to General Wergeland containing all of the points brought out in the Council meeting.

Council was then brought up to date concerning legislative matters and the activities of the Society's Legislative Committee. A brief progress report was presented covering proposed legislation sought by the State Board of Medical Examiners, a proposed bill on radiation hazards, the controversial milk control situation, a proposed amendment to the maternal hospital laws, a proposed bill to provide legislative safeguards for committees, a bill requiring compulsory polio inoculations for children attending public schools, and possible second injury legislation. Council also heard a report that the Group Health Association of Washington has indicated an interest in having the Virginia Code amended in such manner that the Association could operate in the State. It was brought out that the Legislative Committee was of the opinion it would be difficult to demonstrate the need for such an operation and any such effort should be opposed.

Reported also was a request from the American Medical Association that a hazardous substance law be sought if such did not already exist. It was the opinion of Mr. Duval and Mr. Miller that the type legislation proposed by AMA overlapped current Virginia statutes to some extent. It was decided the correspondence from AMA should be referred to the Legislative Committee.

A question was raised as to whether or not the Sales Tax Bill before the General Assembly excluded hospital services and drugs. It was believed both items would be included under the bill. It was then moved that the Society oppose the inclusion in any sales tax bill of drugs, appliances and materials used in providing medical services in hospitals. After considerable discussion, a substitute motion was introduced which would have the Council protest the inclusion in the sales tax proposal of drugs and appliances necessary to the rendering of medical services to sick or injured patients. The substitute motion was seconded and adopted.

A question was raised concerning how much responsibility the Society might have in meeting the costs connected with the preparation of those bills proposed by the State Board of Medical Examiners. It was moved that the State Board of Medical Examiners be contacted and advised that the Council feels the preparation of the bills is a proper financial responsibility of the Board. However, should the Board determine the necessary funds are not available, the matter would be referred back to the Executive Committee of the Society for reconsideration and necessary action. The motion was seconded and adopted.

Dr. Barker reported the Medical Society of the District of Columbia had extended an invitation for a joint meeting in 1962. It was Dr. Palmer's feeling that physicians of Northern Virginia would have no objection either way, and any decision of the Council would meet with their approval and support. Council was advised the Society is committed to the Sheraton-Park Hotel for the period of October 14-17. It was then moved that the Society accept the invitation to meet with the District Society if it does not become necessary to cancel the commitment with the Sheraton-Park Hotel. The motion was seconded and adopted.

The President discussed several inquiries which he had received concerning certain programs carried on by local health departments. He stated the inquiries stemmed from the concern of certain members over trends towards socialism now in evidence at the national level. He went on to state he had been requested to appoint a special committee to study public health programs and projects. It was then moved by Dr. Murrell that the President appoint a special liaison committee to the State Department of Health. The motion was seconded and adopted.

The Council was then requested to approve a community cancer demonstration project grant, which is being sought by the Department of Health from the United States Public Health Service. It was stated the object of the grant is to increase case finding by making available cytological examinations to all health department maternal and child health clinics, as well as medically indigent patients of private physicians. The grant would also be used in providing information to the private physician on techniques of obtaining the smear and the possible training of cytotechnicians. It was moved that the project be approved by Council, contingent upon approval by local medical societies. The motion was seconded and adopted.

Next on the agenda was a request from the American Medical Association that county medical societies adopt resolutions assuring needed medical care to everyone regardless of ability to pay. It was mentioned that nearly 400 local societies over the nation have adopted such resolutions thus far.

Dr. Hundley then moved that the Council of The Medical Society of Virginia recommend to each

component society that it create within its jurisdiction effective plans to offer needed professional services to all citizens without regard to the ability to pay, utilizing, and with due regard to, all medical facilities, both public and private. The motion was seconded and adopted.

A letter from the Medical and Chirurgical Faculty of the State of Maryland (State Medical Society) was then considered. The letter endorsed the limiting of federal medical care of all veterans to service connected disabilities. It also recommended that veterans with service connected disabilities be cared for by Armed Forces hospitals, and by local civilian hospitals on a home town care basis. The letter pointed out that 85% of cases cared for in veterans administration hospitals are non-service connected, and this medical care is costing tax payers nearly $1,000,000,000 each year. The letter went on to state that only through a concerted effort by the AMA and all state medical societies could a congressional hearing on the matter be brought about. It was hoped each State Medical Society would endorse the objectives of the Maryland Society and urge AMA to seek a congressional hearing.

After considerable discussion, it was the consensus that Council was not in a position to act at this time, and the matter should again be referred to the Committee on Federal Medical Services for more detailed study. A motion to this effect was seconded and adopted.

A letter from Dr. Ludwig of the AMA Council on Medical Service was then read. Dr. Ludwig called attention to the years of service which have been given the AMA in many capacities by Dr. Henry B. Mulholland, Dr. Vincent Archer and Dr. Edwin Jordan. It was Dr. Ludwig's wish that the appreciation of AMA be made known to the officers of The Medical Society of Virginia.

It was moved that a letter be written to each of the physicians concerned, letting them know the AMA letter had been received, and the Council commended them on their efforts in behalf of the profession. The motion also requested that appropriate notice of the AMA action be taken by the Virginia Medical Monthly. The motion was seconded and adopted.

Council was then informed that two members, under age 70, had recently resigned from the Society because of retirement. At the present time, there is no provision in the By-Laws by which a retired member under 70 may be exempt from the payment of dues. There was some feeling that since the generally accepted retirement age in industry is 65, The Medical Society of Virginia would do well to make it possible for a member retiring after that age to be exempt from dues upon request. A motion to that effect was seconded and adopted.

Next to be considered was a request from the Department of Preventive Medicine, University of Virginia, that the Society endorse a research project on the Duchene type muscular dystrophy. A motion endorsing the project carried.

Dr. Thompson then discussed the scientific program of the annual meeting and read a letter from two physicians who believed the program was not as complete as it might be. These physicians believed too much time is wasted by having nothing scheduled and a very concentrated schedule of lectures would enhance the prestige of the Society. They also felt a more complete schedule would attract a larger attendance. It was the decision of Council that the letter be referred to the Program Committee for its consideration.

Council was then advised that an amendment has been proposed to the Constitution and By-Laws which would make the Commissioner of Mental Hygiene and Hospitals an ex-officio member of the Council. It was explained that the proposed amendment would be referred to the Judicial Committee and the matter will be voted on at the October meeting. Thus, no official action by Council was required.

There being no further business, the meeting was adjourned.

Robert I. Howard
Secretary

Woman's Auxiliary . . . .

Mrs. Howard.

Margaret Porter Howard, the wife of Dr. Kalford W. Howard, will be installed as President of the Woman's Auxiliary to the Southern Medical Association on November 1, 1960.



Born in Portsmouth, she received her early education here, attended the State Teachers' College in Farmville, and taught in county schools for three years. She married Dr. Howard after his graduation from the University of Virginia, and taught in Albemarle County while he served his internship at the University Hospital. After his World War I service, Dr. and Mrs. Howard returned to Portsmouth, where Dr. Howard is still active in the practice of general medicine and surgery.

Their son, Kalford W. Howard, Jr., graduated from his father's Alma Mater as an electronic engineer. He is married to the former Julia Dennis, and they have two fine sons, Dennis, seven, and David, two and a half, who look forward to the happy reunions when Grandmother and Granddaddy can come up to their home in Charlottesville, Virginia for the week end.

Margaret Howard has contributed to the cultural, civic, humanitarian and welfare interests of Portsmouth for more than thirty years. She has served with distinction at almost all levels of the P.T.A. organization. She has just completed a third term on the Community Chest Board. She has been active in the Community Concert Association. She is a director of Portsmouth General Hospital, and a Past-President of the Hospital Auxiliary. She holds membership in the D.A.R., the U.D.C., the Portsmouth Woman's Club, and other groups.

She has played a leading role in the Medical Society Auxiliary work. She is a charter member of the Woman's Auxiliary to the Portsmouth Academy of Medicine, organized in 1947, was Chairman of the Committee to draw up the first By-laws, and is now Parliamentarian. She is an Associate Member of the Woman's Auxiliary to the Norfolk County Medical Society, and prior to the organization of the Portsmouth Academy of Medicine, was an active member and served as Treasurer, President, and Chairman of various committees. She was Treasurer and President of the Woman's Auxiliary to The Medical Society of Virginia, and is now serving as Finance Chairman. In the Woman's Auxiliary to the Southern Medical Association, she was Councilor from Virginia for two years, Treasurer, Vice-President and is now President-Elect.

In 1957 Margaret Howard was honored as Portsmouth's "Woman of the Year", in a tribute she richly deserves. "She is a charming and capable lady who undertakes with great dignity each task to which she is called, and faithfully and efficiently performs each in its turn to the very best of human ability".

Alice M. Jones

Northampton-Accomac.

The Auxiliary to the Northampton-Accomac Medical Society held its first meeting of the New Year at "Endview", the home of Dr. and Mrs. John R. Hamilton in Nassawadox. There was an attendance of twenty members and one guest. The president, Mrs. W. C. Henderson, presided.

Mr. Gordon Westcoat showed colored slides of thirty-six old homes and historic buildings on the Eastern Shore and gave the high spots of their histories, with the first settlement in 1776. Many old homes were shown that were very lovely and in perfect condition with beautiful old gardens.

The business hour and social followed.

Catherine R. Trower (Mrs. Holland)
Chairman, Press and Publicity

Editorial . . . .

Our Land Some Day

THE RECOGNITION of the centennial of the Civil War must necessarily produce mixed emotions, regardless of where one's sympathy lies. It is certainly not a celebration. It will commemorate many things to many people: heroism, devotion to principle, suffering, sacrifice, military genius or the preservation of the Union. From a medical standpoint would it not be well to memorialize instances where vision became broader than the consideration of partisan interest.

In Winchester Dr. Hunter McGuire persuaded General Jackson to return six captured Northern Medical Officers as non-combatants without requiring exchange. This action must have established some precedence as General Sheridan immediately released Dr. McGuire when he was captured at Waynesboro.

Dr. J. B. McCaw, in addition to skillfully administering the Chimborazo Hospital, found time to edit the Confederate States Medical and Surgical Journal. It is said that an important feature of the publication was the abstract of articles on military medicine published in Northern medical journals. Here was evidence of the universality of medical language.

There must be many other incidents and expressions that might help erase any remaining scar of the eighteen sixties. It would be unthinking to permit the exhibits to encourage any keloid formation.

Probably the most noted conciliatory actions in the Civil War story are Grant's permitting the Confederates to take their horses home and Lee's admonishing his defeated colleagues to accept the responsibility of citizenship in the United States. A medical episode might be also mentioned. When General Weitzel accepted the surrender of the Chimborazo Hospital, he expressed pleasure at renewing an old friendship with Dr. McCaw and showed willingness to let bygones be bygones by accepting a mint julep.

ENNION S. WILLIAMS

Uniform Forms

FOR MANY YEARS insurance companies have been working to standardize and simplify forms used for claim purposes. This spring a standardized form for writing the attending physician of an applicant for insurance is being introduced. This form was prepared by the Health Insurance Council and has been approved by the Council on Medical Service of the American Medical Association.

It might be pertinent to ask why insurance companies need to write an applicant's

attending physician in addition to having an examination made by one of its medical examiners. The answer lies in the fact that medical directors of companies believe they have a mission to make the most accurate classification of risks possible within the financial and time limits available to them. The history taken by the medical examiner cannot be more accurate than the applicant's own understanding of his history. By obtaining first hand information from the attending physician, questions and doubts can be eliminated and more often than not this results in more liberal assessment of the risk.

The method of asking for information is important. There are many hundreds of life companies in the United States and no one can speak for them all but there are some principles that would be agreed to by a majority of the medical directors.

1. A request for information should be accompanied by a written authorization to release this information signed by the applicant.
2. The request should be for factual data, not for an opinion regarding insurability.
3. The interchange of information should be between the medical director of the company and the attending physician, not through a third party.
4. The company should pay the attending physician for the statement and the physician should charge in proportion to the time and effort required to answer the inquiry.
5. The decision regarding insurability should be the responsibility of the company's medical director and no blame for unfavorable action should accrue either directly or implied to the attending physician.

This new form is a sincere endeavor made by the companies to make the paper work of physicians less burdensome.

Ennion S. Williams

Society Activities . . . .

Virginia Society of Plastic and Reconstructive Surgeons.

On February 11th, at the Tides Beach Club in St. Petersburg, Florida, the practicing plastic surgeons in the Old Dominion consolidated and agreed to establish a Society composed of members practicing this specialty in the State of Virginia. This informal meeting took place at the annual meeting of the Southeastern Society of Plastic and Reconstructive Surgeons.

Officers elected were Dr. Claude C. Coleman, Jr., University of Virginia, president; Dr. Charles E. Horton, Norfolk, vice-president; and Dr. Leroy Smith, Richmond, secretary and treasurer.

The Virginia Society of Ophthalmology and Otolaryngology

Will hold its meeting at the Williamsburg Inn, Williamsburg, April 28-30. The first day will be limited to speakers on Otolaryngology. Dr. Maurice H. Cottle, Chicago, will present two papers: Premaxilla-Maxilla Approach to Septum Surgery and Correlation of Nasal Function to Nasal Operation. Dr. F. Johnson Putney, Philadelphia, will lecture on Benign Tumors of the Larynx and Pharynx; and Dr. John Bordley, Baltimore, on The Problems of Deafness in Old Age.

April 29th will be limited to papers by members of the Society.

On the 30th, the topic for discussion will be Ophthalmology. Dr. Edmund Spaeth, Philadelphia, will give two talks on Diagnosis and Treatment of Abductor Defects and Vertical Muscle Disturbances with Horizontal Concomitant Strabismus. Dr. Harvey Thorpe, Philadelphia, will speak on Management of Intraocular Foreign Bodies and Gonioscopy.

Dr. Maynard P. Smith, Richmond, is president of this Society, and Dr. M. K. Humphries, Jr., Charlottesville, secretary-treasurer.

Northern Virginia Clinical Assembly.

The Eleventh Annual Assembly was held on April 3rd in Arlington. This Assembly is sponsored by the Alexandria, Fairfax County and Arlington Medical Societies. The following program was presented by members of the staff of the National Institutes of Health:

The National Institutes of Health and the Clinical Center in their Relationship with the Medical Community by Dr. Clifton K. Himmelsbach, Associate Director, Clinical Center; Persisting Problems in Bacterial Diseases by Dr. John P. Utz, Chief Infectious Diseases Services, Laboratory of Clinical Investigations; Some Instructive Endocrinopathies by Dr. Roy Hertz, Chief Endocrinology Branch, National Cancer Institute; Connective Tissue Disease —Current Concepts and Treatment by Dr. Roger L. Black, Arthritis and Rheumatism Branch, Clinical Investigations; The Use and Abuse of Tranquilizers by Dr. Jonathan O. Cole, Chief Psychopharmacology Service Center, National Institute of Mental Health; and The Place of the Clinical Pathological Laboratory in the Diagnosis of Disease by Dr. George Z. Williams, Chief Pathology Department, Clinical Center.

The Mid-Tidewater Medical Society

Held its quarterly meeting at West Point on January 26th. The following program was presented: Meig's Syndrome by Dr. Kinloch Nelson; Treatment of Chronic Renal Failure by Dr. Solomon Papper; and The Protein Manifestations of Amyloid Disease by Dr. W. T. Thompson, Jr. All speakers are from the Medical College of Virginia.

News Notes . . . .

New Members.

The following new members have been admitted into The Medical Society of Virginia, since the list published in the March issue of the Monthly:

Paul Brown Givens, Jr., M.D., Newport News
John Francis Hannon, M.D., Falls Church
James Albert Higgs, Jr., M.D., Staunton
Phyllis Ray Ingram, M.D., Charlottesville
William J. Lawson, M.D., Herndon
James Min Lin, M.D., Norfolk
Harold Wilbur Miller, Jr., M.D., Woodstock
Stuart Connell Nottingham, M.D., Winchester
J. Arthur Seaholm, M.D., Richmond
John Barry Sherry, M.D., Waynesboro
Barbara Kramer Silbersiepe, M.D., McLean
Allan Hugh Stewart, M.D., Falls Church
Charles Gwyn Thompson, M.D., Marion
Frank Quinby Wingfield, Jr., M.D., Newport News
Oscar DeMelle Yarbrough, M.D., Charlottesville

Dr. Walter A. Porter,

Hillsville, has been chosen grand junior deacon of the Grand Lodge of Virginia Masons. It is a position from which he will succeed by normal progression and without opposition to that of grand master in years to come.

Dr. Beverley Randolph Wellford,

Richmond, has been named president of the Virginia Historical Society. He will fill the unexpired term of the late Dr. Wyndham B. Blanton.

Medical Seminar Cruise.

The Duke University School of Medicine is again offering doctors a chance to combine postgraduate study with an overseas vacation by sponsoring its fifth medical seminar cruise.

The cruise ship, *T. S. Ariadne,* will sail from Wilmington, North Carolina, on June 5th and from New York City on June 8th. The ship will take doctors to the Baltic, visiting Le Havre, Cuxhaven, Leningrad, Helsinki, Stockholm, Copenhagen, and Hamburg. The cruise will terminate in Hamburg on June 28th.

Shipboard lectures will be given on various subjects in medicine, pediatrics and thoracic surgery. The faculty will be composed of the following members of the Duke staff: Dr. Jerome S. Harris, professor and chairman of the pediatrics department; Dr. Doris Ahlee Howell, associate professor of pediatrics and pediatric hematologists; Dr. Will C. Sealy, professor of thoracic surgery; and Dr. William M. Nicholson, professor of medicine and assistant dean in charge of postgraduate education. Arrangements are being made for lectures in the medical centers at Leningrad, Helsinki, Stockholm, and Copenhagen. The medical program has been approved by the American Academy of General Practice for Category I Credit.

Further information may be obtained from Dr. W. M. Nicholson, Duke University Medical Center, Durham, North Carolina.

Dr. C. Lydon Harrell,

Norfolk, has resigned as director of the Tidewater Regional Blood Center and has returned to private practice. He has directed this activity for the past eight years.

Dr. Harrell is succeeded by Dr. Charles Lee Ferguson, recently retired United States Naval medical officer.

Papers for Southern Medical Association.

The Section of Ophthalmology and Otolaryngology of the Southern Medical Association announces they are now accepting papers by physicians of either specialty living in the area of the Association for consideration for presentation at the next annual meeting in St. Louis, October 31st to November 3rd.

The paper or an abstract may be sent directly to the secretary, Dr. Albert C. Esposito, Suite 1212, First Huntington National Bank Building, Huntington, West Virginia, as soon as possible.

Dr. Frank E. Handy,

Appalachia, has been named "outstanding citizen of the year" for Wise County. The award was presented by the Chamber of Commerce.

Executive Committee of Hospital.

Dr. Cecil F. Evans, Jr., has been elected president of the executive committee of Riverside Hospital, Newport News. Other members of the committee are:

Dr. W. L. Davis, vice-president; Dr. J. E. McClellan, secretary-treasurer; Dr. W. R. Payne, chief of obstetrics and gynecology; Dr. H. L. Kraus, chief of general practice; Dr. E. L. Alexander, Jr., chief of internal medicine; Dr. A. C. Stanton, chief of surgery; Dr. O. W. Booth, chief of pediatrics; Dr. M. F. Sherrill, chief pathologist; and Dr. Q. J. Legg, chief of radiology.

Alumni Association, Medical College of Virginia.

Dr. Richard A. Michaux, Richmond, has been named as the new president of the Alumni Association.

Dr. Peter N. Pastore has been appointed as chairman of the alumni reunion committee for June, 1960, and Dr. Wyndham B. Blanton, Jr., as chairman for the annual scientific assembly in 1961.

Dr. James B. Shuler,

Recently of Shenandoah, has been appointed Director of Student Health Service at the Florida State University, Tallahassee. He began his duties on March 15th.

Dr. Vinson Honored.

The bronchoscopy operating room of the Medical College of Virginia will now be known as the Dr. Porter Paisley Vinson Surgery. A bronze plaque bearing these words has been attached to the door of the room in tribute to the late Dr. Vinson.

Yale Sesquicentennial.

The Yale School of Medicine will celebrate a century and a half of existence on October 28-29, 1960. The occasion will be marked by meetings, exhibitions, and addresses. Among a notable group of guest speakers will be Sir Howard Florey of Oxford, England.

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Male Psychiatrist; Diplomate or with three years approved training; to join group practice 145-bed approved psychiatric hospital. Salary: $15,000-$18,000 first year; $20,000-$25,000 second with incentive factor. Write #700, care the Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

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Practice Available.

The large, active general practice of the late Dr. Louis Friedman in the Medical Arts Building, Norfolk, Virginia, fully equipped and active, is available for sale. An immediate large practice is assured. Terms can be arranged. Contact Dr. A. Friedman, 319 Wainwright Building, Norfolk, Virginia. (*Adv.*)

Obituaries . . . .

Dr. James Waller Smith,

Prominent physician of Gloucester County, died at his home in Hayes on February 26th. He was seventy-five years of age and a graduate of the Medical College of Virginia in 1909. Dr. Smith had practiced in Gloucester County for fifty years and had been the county medical examiner for the past thirty years. He was one of the founders of the Mid Tidewater Medical Society. Dr. Smith had been a member of The Medical Society of Virginia since 1927 and was a member of the Fifty Year Club.

His wife, three sons and a daughter survive him.

Dr. Louis Friedman,

Well-known Norfolk physician, died February 16th, following a heart attack. He was a native of Latvia and seventy-one years of age. Dr. Friedman graduated from the College of Physicians and Surgeons, Baltimore, in 1912. He located in Norfolk, following his graduation. He had been a member of The Medical Society of Virginia for twenty-years.

His wife and two sons survive him. One son is Dr. Asher A. Friedman, also of Norfolk.

Dr. Emlyn H. Marsteller,

Manassas, died February 12th, at the age of eighty-three. He graduated from the Medical College of Virginia in 1902 and practiced in New York until he came to Northern Virginia in 1920. Dr. Marsteller was director of the Maryland-Virginia Milk Producers Association for twenty-two years, a member of the school board, Kiwanis Club, and Underprivileged Childrens Committee of Manassas. He had been a member of The Medical Society of Virginia for thirteen years.

He is survived by two sons and a daughter.

Dr. Thomas Douglas Spies,

President-elect of the Southern Medical Association, died February 28th. He was director of the Spies Clinic at Hillman Hospital in Birmingham. In 1957, Dr. Spies received the American Medical Association's distinguished service award for his work in the field of nutrition.

Dr. Spies was to have been installed as president of the Southern Medical Association at its annual meeting in St. Louis, October 31-November 3, 1960.

Dr. Blanton.

Richmond was greatly saddened by the death of Dr. Wyndham Blanton on January 6, 1960, doubly shocked because he seemingly had recovered from myocardial infarction and had resumed in part his practice of Internal Medicine.

Dr. Blanton made for himself a life of many interests, of which we shall mention three: in medicine he was a practicing physician, a teacher of medicine and an historian of medicine in Colonial Virginia; in religion, he was an Elder of the Second Presbyterian Church and Chairman of the Board of Trustees of the Union Theological Seminary; in citizenship, he sought to preserve and restore the antiquities of Richmond, became the president of the Historic Richmond Foundation of the Virginia Historical Society.

Dr. Blanton's career in medicine began with graduation at the College of Physicians and Surgeons of Columbia University in 1916, followed by graduate study at Columbia, Berlin, and Edinburgh. He then served as a captain in the Army Medical Corps and as a surgeon in the U.S. Public Health Service during World War I. He began the practice of medicine in Richmond in 1920 with his father, Dr. Charles A. Blanton. In addition to his practice, he taught at the Medical College of Virginia and organized the Immunology Clinic there in 1936. He later was appointed professor of Clinical Medicine and also professor of the History of Medicine.

Dr. Blanton published many papers concerned with clinical medicine in particular the field of allergy. His talent for writing combined with his love of scholarship and teaching led to his appointment as editor of the Virginia Medical Monthly, and in later years he was a contributing editor to the Journal of the History of Medicine and Allied Sciences, and was associate editor of the Annals of Medical History.

Medical research and practice, however, stem from the roots of those who have gone before, and now we find Dr. Blanton digging through the layers of Virginia's Colonization to produce a superb History of Medicine in Virginia in the Seventeenth Century. This authoritative volume was followed by histories of medicine in the 18th and 19th centuries.

In recognition of his preeminence as an Internist, Dr. Blanton was selected as the first president of the Richmond Society of Internal Medicine. He was also president of the Richmond Academy of Medicine and an organizer of the Section of History of the Academy, vice-president of the American Academy of Allergy, vice-president of the Southern Medical Association, and a Life Member of the American College of Physicians. He was awarded an honorary degree of Doctor of Letters by Hampden-Sydney College in 1933, and an honorary membership in Omicron Delta Kappa and Phi Beta Kappa.

Your committee respectfully submits this tribute to the memory of Dr. Blanton and suggests that the Richmond Academy of Medicine transmit to Mrs. Blanton and her family this mark of our respect and esteem for a man who has brought so much honor to our profession.

Emmett C. Mathews
John W. Powell
M. M. Pinckney, *Chairman*

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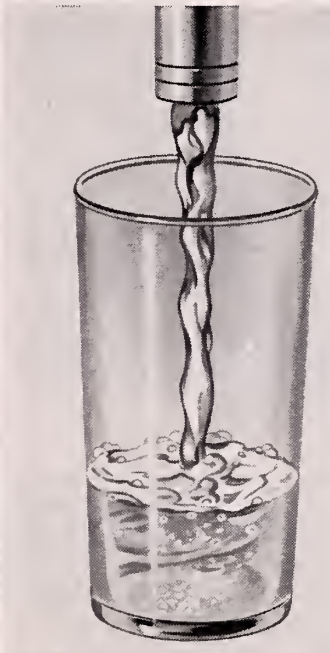
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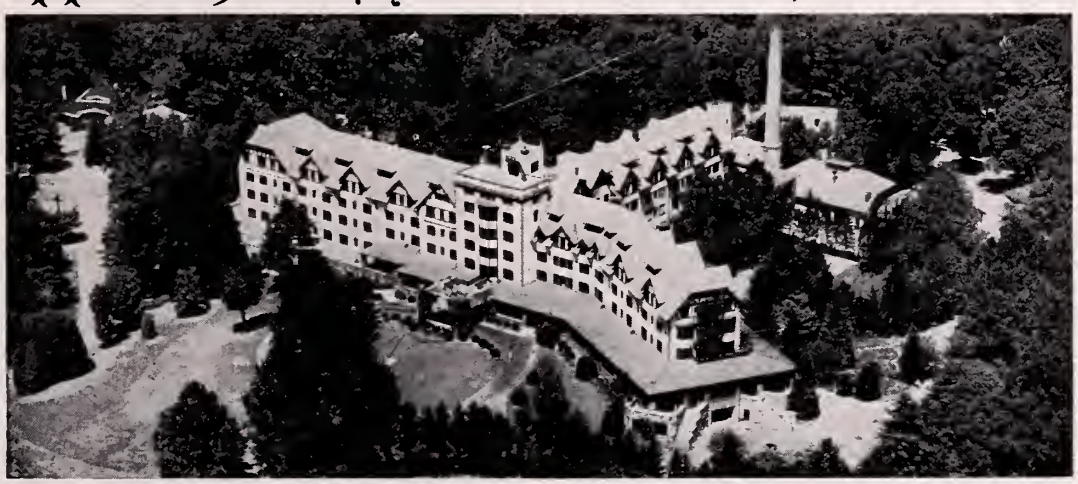
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All applications and other documents pertaining to the examination or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 20, 1960. The Secretary of the Board is Dr. K. D. Graves, 631 1st Street, S.W., Roanoke, Virginia.

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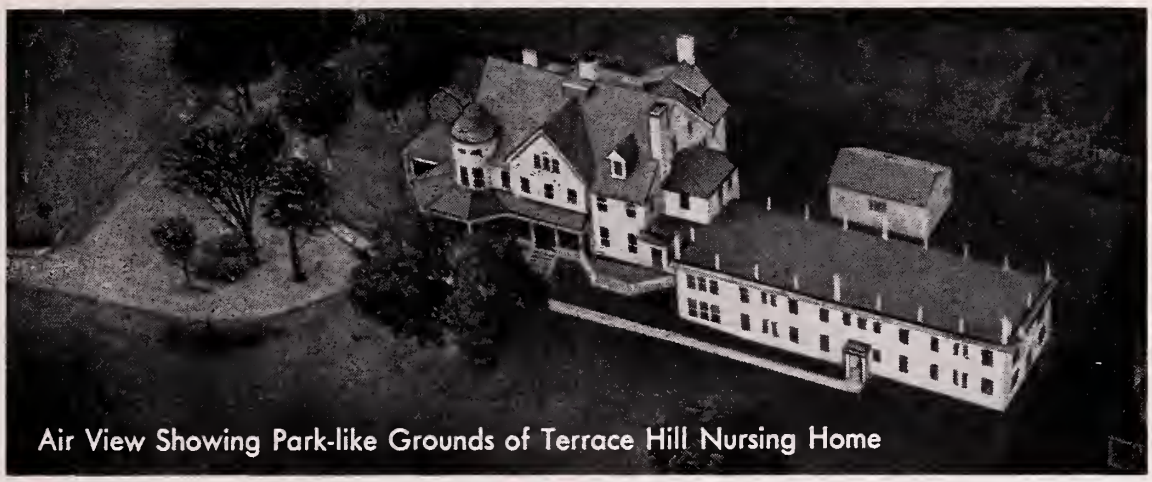
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Tofrānil
a potent thymoleptic . . .
not a MAO inhibitor.

Does act effectively in *all* types of depression regardless of severity or chronicity.

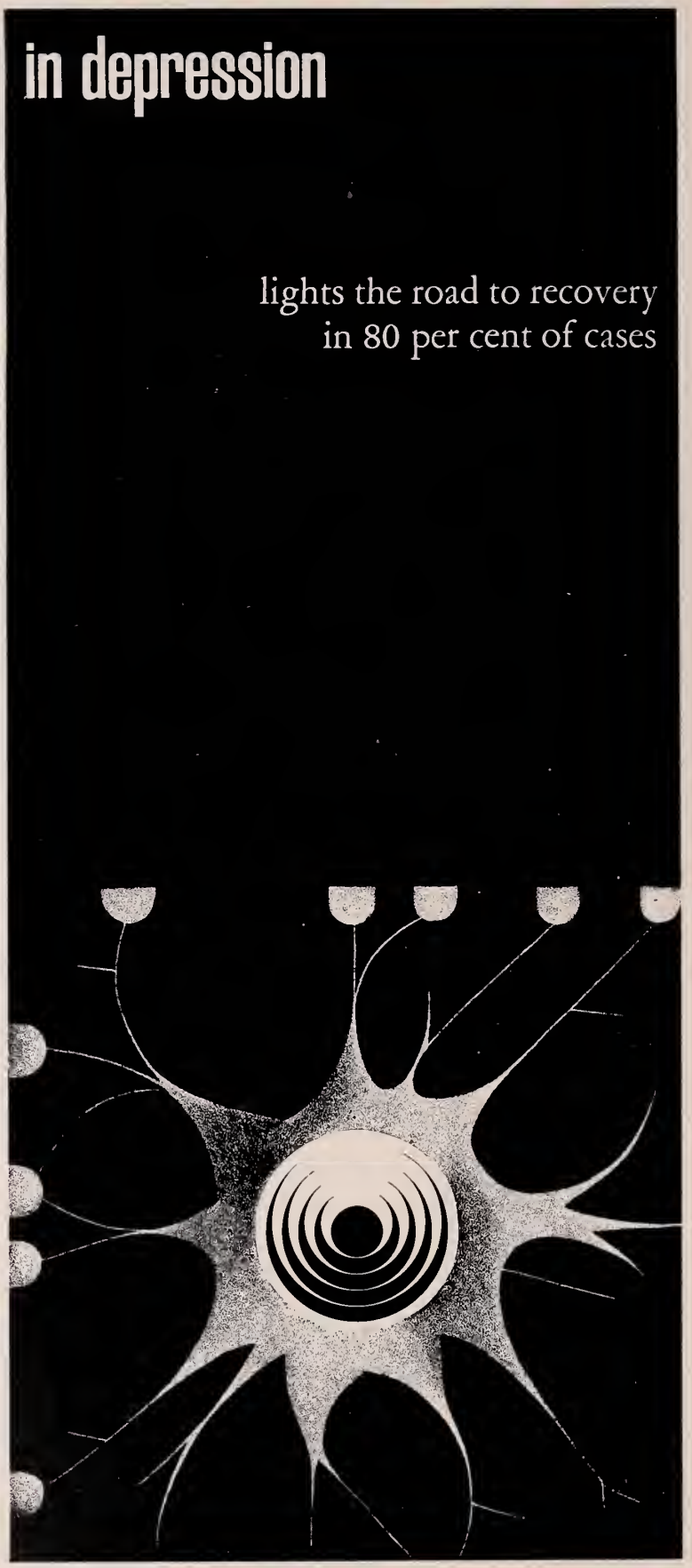
Does not inhibit monoamine oxidase in brain or liver; produce CNS stimulation; or potentiate other drugs such as barbiturates and alcohol.

Detailed Literature Available on Request.

Tofrānil® brand of imipramine HCl: tablets of 25 mg., bottles of 100. Ampuls for intramuscular administration only, each containing 25 mg. in 2 cc. of solution, cartons of 10 and 50.

References: 1. Ayd, F. J., Jr.: Bull. School Med., Univ. Maryland *44*:29, 1959. 2. Azima, H., and Vispo, R. H.: A.M.A. Arch. Neurol. & Psychiat. *81*:658, 1959. 3. Lehmann, H. E.; Cahn, C. H., and de Verteuil, R. L.: Canad. Psychiat. A. J. *3*:155, 1958. 4. Mann, A. M. and MacPherson, A. S.: Canad. Psychiat. A. J. *4*:38, 1959. 5. Sloane, R. B.; Habib, A., and Batt, U. E.: Canad. M.A.J. *80*:540, 1959. 6. Straker, M.: Canad. M.A.J. *80*:546, 1959. 7. Strauss, H.: New York J. Med. *59*:2906, 1959.

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The secret of a successful geriatric diet is acceptance

The more appetizing the bill of fare you can offer, the more likely it is your geriatric patient will stay on his diet.

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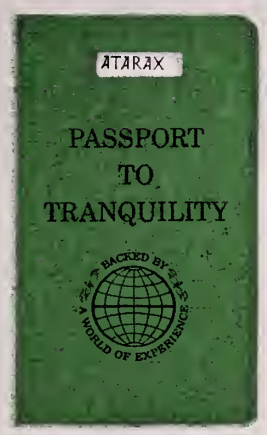
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IN ELDERLY PATIENTS well tolerated by debilitated patients	"...seems to be the agent of choice in patients suffering from removal disorientation, confusion, conversion hysteria and other psychoneurotic conditions occurring in old age." Smigel, J. O., et al.: J. Am. Geriatrics Soc. **7**:61 (Jan.) 1959.	Settel, E.: Am. Pract. & Digest Treat. **8**:1584 (Oct.) 1957. Negri, F.: Minerva med. **48**:607 (Feb. 21) 1957. Shalowitz, M.: Geriatrics **11**:312 (July) 1956.
IN ALLERGIC PATIENTS useful adjunctive therapy for asthma and dermatosis; particularly effective in urticaria	"All [asthmatic] patients reported greater calmness and were able to rest and sleep better...and led a more normal life....In chronic and acute urticaria, however, hydroxyzine was effective as the sole medicament." Santos, I. M., and Unger, L.: Presented at 14th Annual Congress, American College of Allergists, Atlantic City, New Jersey, April 23-25, 1958.	Eisenberg, B. C.: J.A.M.A. **169**:14 (Jan. 3) 1959. Coirault, R., et al.: Presse méd. **64**:2239 (Dec. 26) 1956. Robinson, H. M., Jr., et al.: South. M. J. **50**:1282 (Oct.) 1957.
IN HYPEREMOTIVE ADULTS does not impair mental acuity	"...especially well-suited for ambulatory neurotics who must work, drive a car, or operate machinery." Ayd, F. J., Jr.: New York J. Med. **57**:1742 (May 15) 1957.	Garber, R. C., Jr.: J. Florida M. A. **45**:549 (Nov.) 1958. Menger, H. C.: New York J. Med. **58**:1684 (May 15) 1958. Farah, L.: Internat. Rec. Med. **169**:379 (June) 1956.

SUPPLIED: Tablets, 10 mg., 25 mg., 100 mg.; bottles of 100. Syrup (10 mg. per tsp.), pint bottles. Parenteral Solution: 25 mg./cc. in 10 cc. multiple-dose vials; 50 mg./cc. in 2 cc. ampules.

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For geriatric and chronically ill patients— a smooth, balanced action that lifts depression as it calms anxiety...rapidly and safely

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Acts swiftly—the patient often feels better, sleeps better, within two or three days. Unlike most other antidepressant drugs, Deprol relieves the patient quickly—often within two or three days.

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1. Pomeranze, J. et al.: J.A.M.A. 171:252, Sept. 19, 1959.
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3. Odell, W. D., et al.: A.M.A. Arch. Int. Med. 102:520, 1958.
4. Pearlman, W.: Phenformin Symposium, Houston, Feb. 1959.
5. Lambert, T. H.: ibid.
6. Skillman, T. G., et al.: Diabetes 8:274, 1959.

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Squibb Alpha-Phenoxyethyl Penicillin Potassium

new chemically improved penicillin which provides the highest blood levels that are obtainable with oral penicillin therapy



As a pioneer and leader in penicillin therapy for more than a decade, Squibb is pleased to make Chemipen, a new chemically improved oral penicillin, available for clinical use.

With Chemipen it becomes possible as well as convenient for the physician to achieve and maintain higher blood levels—with greater speed—than those produced with comparable therapeutic doses of potassium penicillin V. In fact, Chemipen is shown to have a 2:1 superiority in producing peak blood levels over potassium penicillin V.*

Extreme solubility may contribute to the higher blood levels that are so notable with Chemipen.* Equally notable is the remarkable resistance to acid decomposition (Chemipen is stable at 37°C. at pH 2 to pH 3), which in turn makes possible the convenience of oral treatment.

And the economy for your patients will be of particular interest—Chemipen costs no more than comparable penicillin V preparations.

Dosage: Doses of 125 mg. (200,000 u.) or 250 mg. (400,000 u.), t.i.d., depending on the severity of the infection. The usual precautions must be carefully observed with Chemipen, as with all penicillins. Detailed information is available on request from the Professional Service Department.

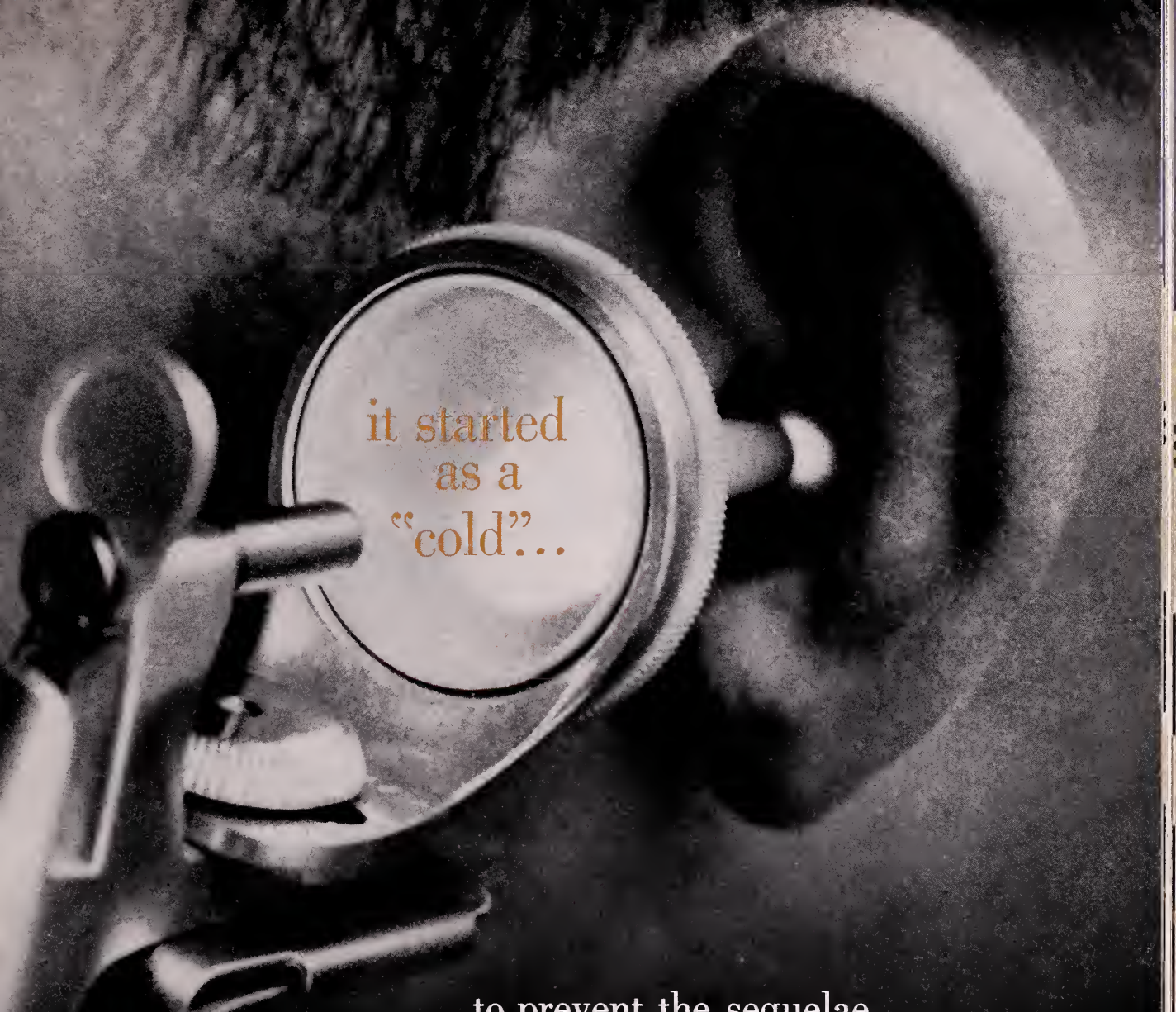
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*Knudsen, E. T., and Rolinson, G. N.: Lancet 2:1105 (Dec. 19) 1959.

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1. Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933

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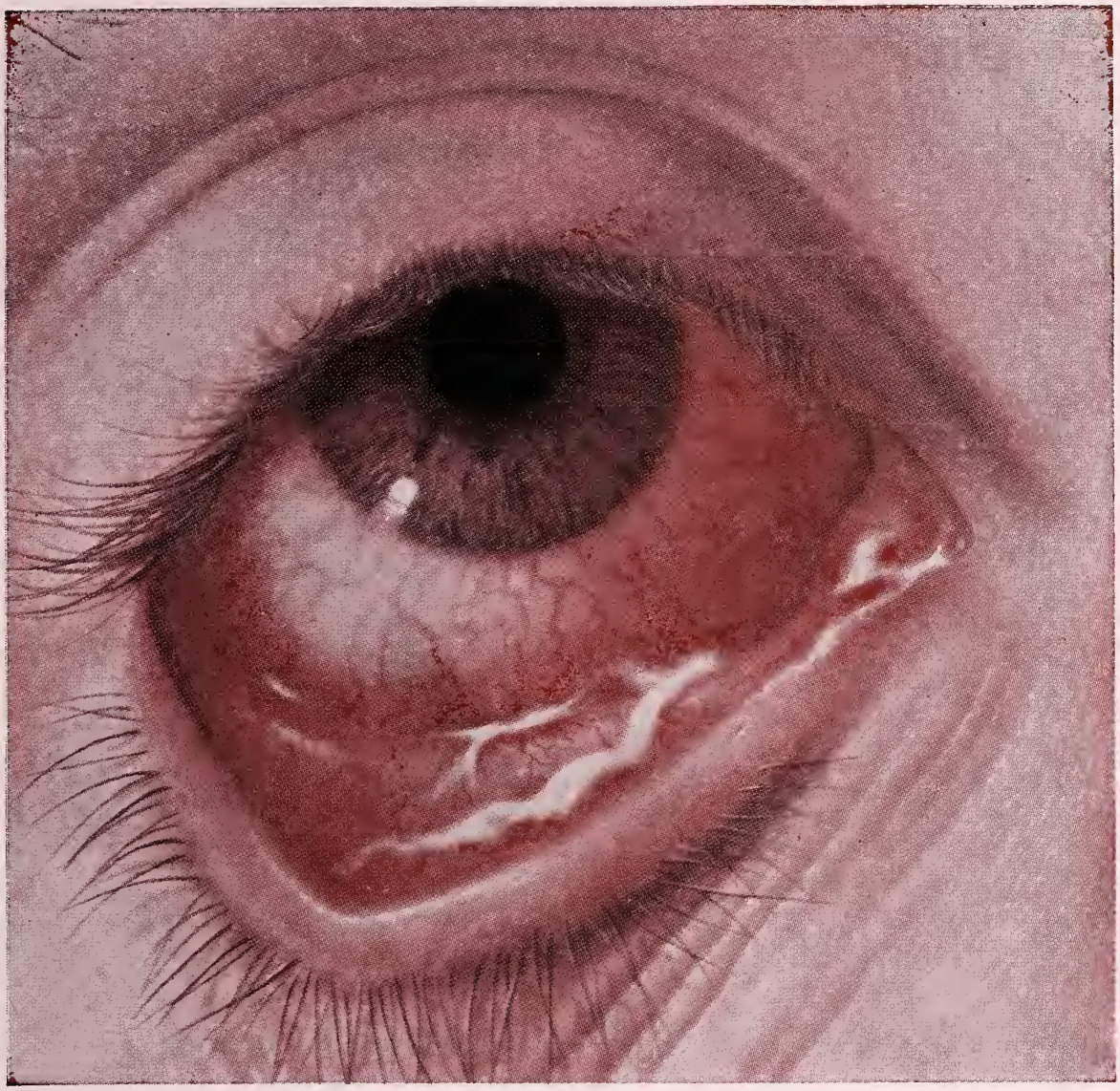
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2. Roberts, E.: Four Year Evaluation of an Antihypertensive Agent, J. Am. Med. Women's Assn. *13*:349 (1958).

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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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Supplied: **PATHIBAMATE-400**—Each tablet (yellow, 1/2-scored) contains meprobamate, 400 mg.; PATHILON tridihexethyl chloride, 25 mg.

PATHIBAMATE-200—Each tablet (yellow, coated) contains meprobamate, 200 mg.; PATHILON tridihexethyl chloride, 25 mg.

Administration and Dosage: **PATHIBAMATE-400**—1 tablet three times a day at mealtime and 2 tablets at bedtime.

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Adjust to patient response.

Contraindications: glaucoma; pyloric obstruction, and obstruction of the urinary bladder neck.

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stimulates the appetite,

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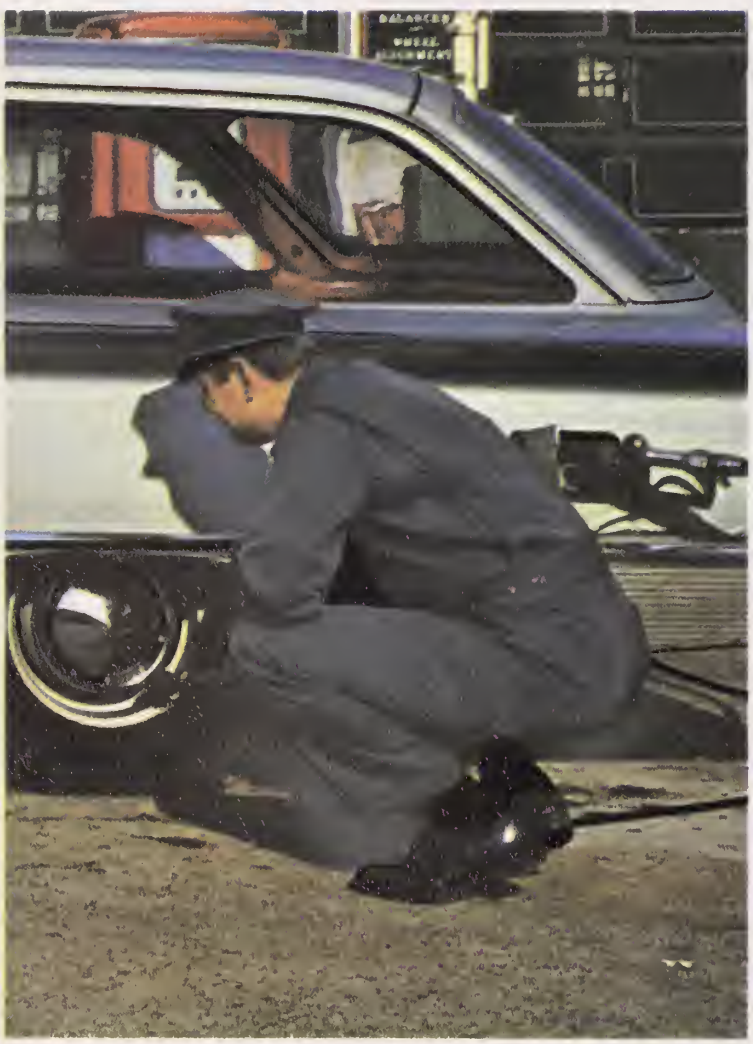


Clinical reports on LOW BACK PAIN show that *Trancopal*®

a true "tranquilaxant," keeps the patient on the job

A TRUE "TRANQUILAXANT"

Trancopal®



relaxes skeletal muscle spasm so the patient can continue to work

Clinical experience shows that Trancopal will enable your patients with low back pain to keep going strong. Lichtman[1] reports that 310 of his 331 patients treated with Trancopal obtained satisfactory relief. These patients were suffering from low back pain, stiff neck, postoperative muscle spasm or other skeletal muscle spasms associated with trauma, bursitis, osteoarthritis and rheumatoid arthritis. Mullin and Epifano[2] reported that Trancopal brought relief to all of 39 patients with skeletal muscle spasm. In these patients, who had suffered from trauma, bursitis, rheumatoid arthritis, osteoarthritis, and intervertebral disc syndrome, the effect of Trancopal was ". . . excellent and prompt . . ."[2] Gruenberg[3] obtained marked relief with Trancopal in 258 of 304 patients with low back pain, torticollis, arthritis and other conditions associated with skeletal muscle spasm. Moderate relief was obtained in an additional group of 28 patients. Trancopal is a true "tranquilaxant" because "It combines the properties of tranquilization and skeletal muscle relaxation with no concomitant change in normal consciousness."[4] Side effects have been few and minor — and in no case were they serious enough to warrant discontinuing the use of Trancopal.[1] "Trancopal is exceptionally safe for clinical use."[3]

relieves anxiety and tension so the patient can carry on



Trancopal is also an effective agent for patients in anxiety and tension states. According to recent clinical reports,[1,5] it calms the patients but allows them to continue their work or other activity. Indeed, Lichtman found that his patients with anxiety ". . . were in many instances able to continue their normal activities where previously they had been considerably restricted . . ."[1] He observed that Trancopal brought good to excellent relief to 114 of 120 patients in anxiety states. Ganz,[5] who noted good to excellent relief in 32 of 35 patients with globus hystericus, and in his entire series of 100 patients in anxiety or tension states, comments: "Chlormethazanone [Trancopal], by relieving the psychogenic symptoms, allows the patient to use his energies in a more productive manner in overcoming his basic problems."[5]

Relieves dysmenorrhea — Trancopal has also proved to be a useful medication in the treatment of patients with dysmenorrhea,[1,4,6] probably producing its effect ". . . by means of a combination of muscle relaxant and tranquilizing actions."[4]

Indications

Musculoskeletal disorders		Psychogenic disorders
Low back pain (lumbago)	Ankle sprain, tennis elbow	Dysmenorrhea
Neck pain (torticollis)	Osteoarthritis	Premenstrual tension
Bursitis	Rheumatoid arthritis	Anxiety and tension states
Fibrositis	Disc syndrome	Asthma
Myositis	Postoperative muscle spasm	Angina pectoris
		Alcoholism

Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms generally occurs promptly and lasts from four to six hours.

How Supplied: Trancopal Caplets® 100 mg. (peach colored, scored) and 200 mg. (green colored, scored), bottles of 100.

eferences: 1. Lichtman, A. L.: Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958. 2. Mullin, W. G., and Epifano, Leonard: Am. Pract. & Digest Treat. :1743, Oct., 1959. 3. Gruenberg, Friedrich: Current Therap. Res. 2:1, Jan., 1960. 4. Shanaphy, J. F.: Current Therap. Res. 1:59, Oct., 1959. Ganz, S. E.: J. Indiana M. A. 52:1134, July, 1959. 6. Stough, A. R.: J. Oklahoma M. A. 52:575, Sept., 1959.

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clinical reports on anxiety show that
A TRUE "TRANQUILAXANT"
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quiets the psyche but leaves the patient alert
"...TRANCOPAL is a most valuable drug for relieving tension, apprehension and various psychogenic states."5
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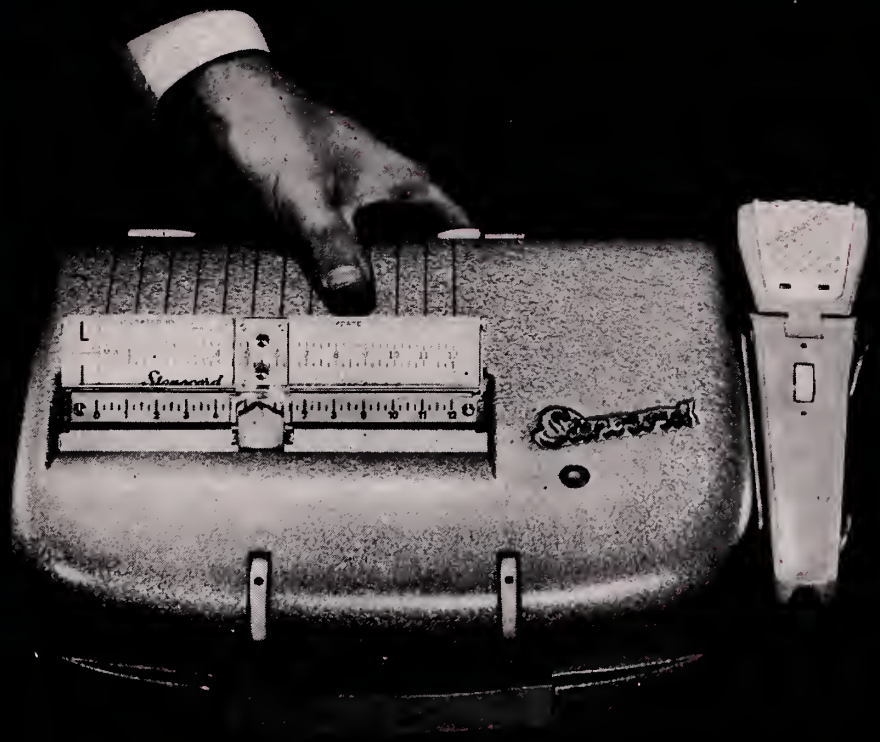
"Good symptomatic responses were seen in 91 of 96 [patients] treated for periods up to one year with average doses of 10 mg. twice daily."

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Winkelstein, A.: Am. J. Gastroenterol. *32*:66-70 (July) 1959.

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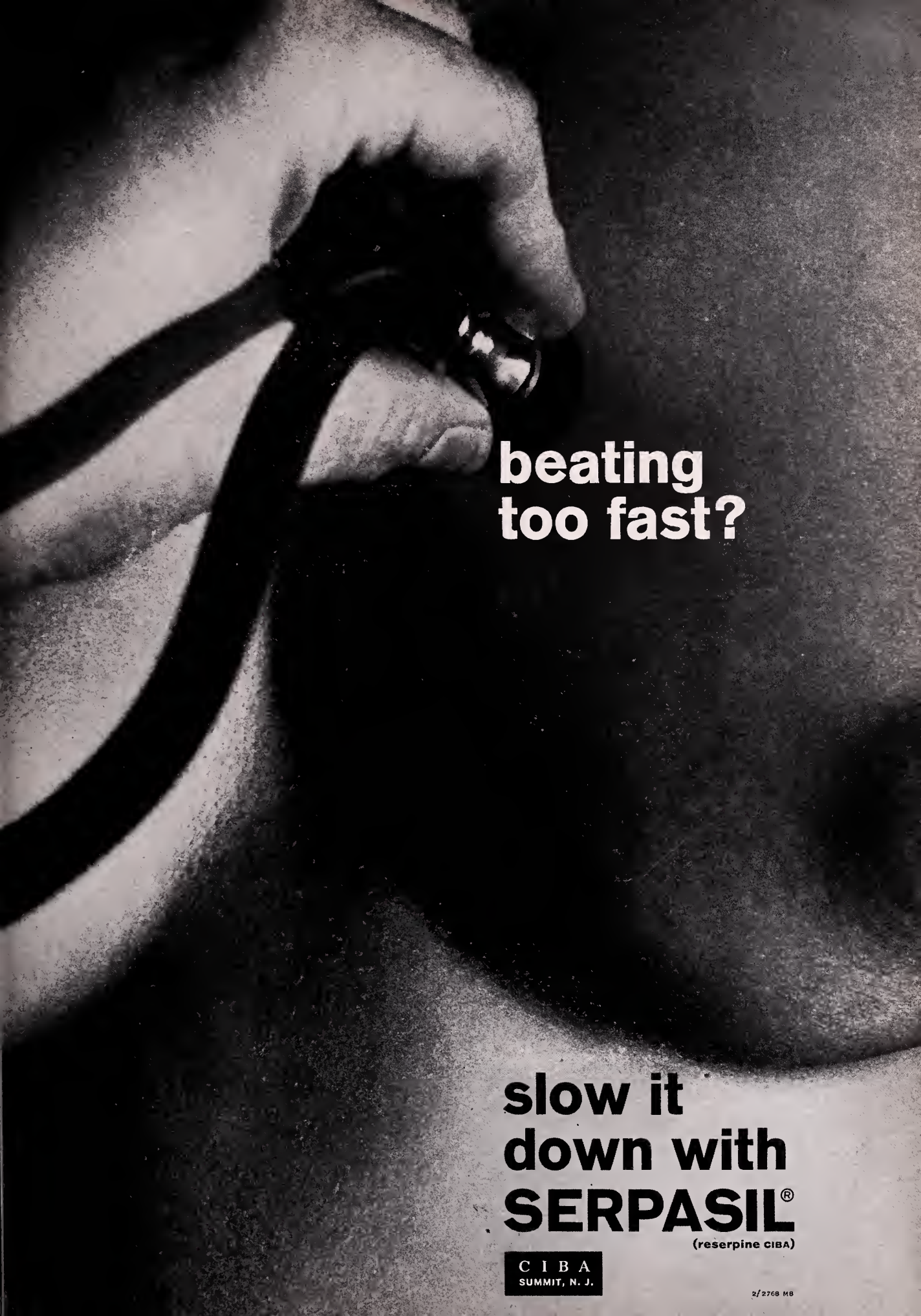
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Significance of complementary action of isomers in SYNCILLIN

The antibiotic effect of the clinically available mixture, SYNCILLIN, is greater than that of either of its two component isomers alone against many important pathogens, including some penicillin-resistant staphylococci. This phenomenon has been described as *Isomeric Complementarity*.

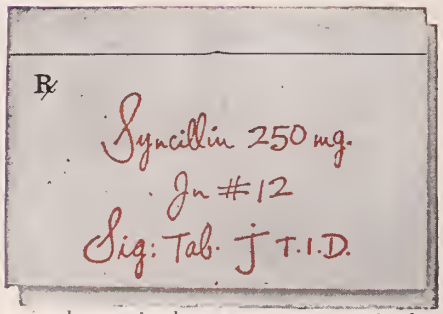
Significance of higher blood levels with SYNCILLIN

Higher blood levels may be of value with organisms of only moderate penicillin sensitivity where doubling the blood concentration may be essential for effective bactericidal action. In addition, these higher levels may be necessary where there is infection in areas with a poor blood supply. Under these circumstances a higher blood concentration may provide the increased diffusion pressure required to deliver adequate amounts to the tissue. Also, antibiotic activity of SYNCILLIN is directly proportional to oral dosage. Increasing the dosage may, therefore, enhance the drug's effectiveness in certain cases.

Efficacy of SYNCILLIN against staphylococci and other resistant organisms

Studies have shown that SYNCILLIN is effective *in vitro* against a higher percentage of hospital "staph" strains, than penicillin G and penicillin V.[1,2] Therefore, if clinical judgment indicates the use of penicillin, SYNCILLIN might be expected to be somewhat more effective. However, since some strains are still resistant to SYNCILLIN as well as to the other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment.

There have recently been reports of decreased efficacy of penicillin in streptococcal[3] and gonococcal[4,5] infections. The emergence of penicillin-resistant gonococci appears to be associated with an increase in the incidence of gonorrhea all over the world. When a less sensitive strain is encountered the higher blood levels produced by SYNCILLIN may be most helpful.



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Relation of intermittent high blood levels of SYNCILLIN to antibacterial efficacy

SYNCILLIN, like all clinically available penicillins, is bactericidal. Periodic high blood concentrations may be sufficient to permit complete eradication of sensitive pathogens. According to Eagle,[6] "Soon after penicillin attains effective concentrations, the bacteria cease multiplying; and the bacteriostatic effect persists for a number of hours after penicillin has fallen to concentrations that are wholly ineffective. . . . The therapeutic significance of this postpenicillin recovery period is enhanced by the fact that the recovering bacteria, damaged but not killed by the previous exposure to penicillin, are abnormally susceptible to the host defenses. In consequence, the bactericidal process *in vivo* continues for many hours after the drug itself has fallen to ineffective concentrations."

Reduced rate of inactivation of SYNCILLIN by staph penicillinase

Bacterial resistance to penicillin has been attributed to the action of penicillin-inactivating enzymes produced by the invading organisms. SYNCILLIN is less affected by staphylococcal penicillinase than either of its component isomers. Further, SYNCILLIN is shown to be more slowly inactivated by this enzyme than penicillin V or penicillin G. Penicillinase from *B. cereus* likewise inactivates SYNCILLIN less rapidly than penicillin V or G.

Indications: SYNCILLIN is recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci. In addition, SYNCILLIN is effective *in vitro* against certain strains of staphylococci resistant to other penicillins. SYNCILLIN, like other oral penicillins, is not recommended at the present time in deep-seated or chronic infections, subacute bacterial endocarditis, meningitis, or syphilis.

Dosage: 125 mg. or 250 mg. three times daily, depending on the severity of infection. Larger doses (e.g., 500 mg. t.i.d.) may be used for more severe infections. SYNCILLIN may be administered without regard to meals. Beta hemolytic streptococcal infections should be treated with SYNCILLIN for at least ten days.

Precautions: At the present time it is not possible to draw definite conclusions regarding the incidence of allergenicity to SYNCILLIN or its cross-allergenicity with natural penicillins. *Therefore, the usual precautions for oral penicillin therapy should always be observed.* Patients with histories of asthma, hay fever, urticaria, or previous reactions to penicillin should be watched with special care. Administration of oral penicillin, in rare instances, may provoke acute anaphylaxis, particularly in penicillin-sensitive individuals.

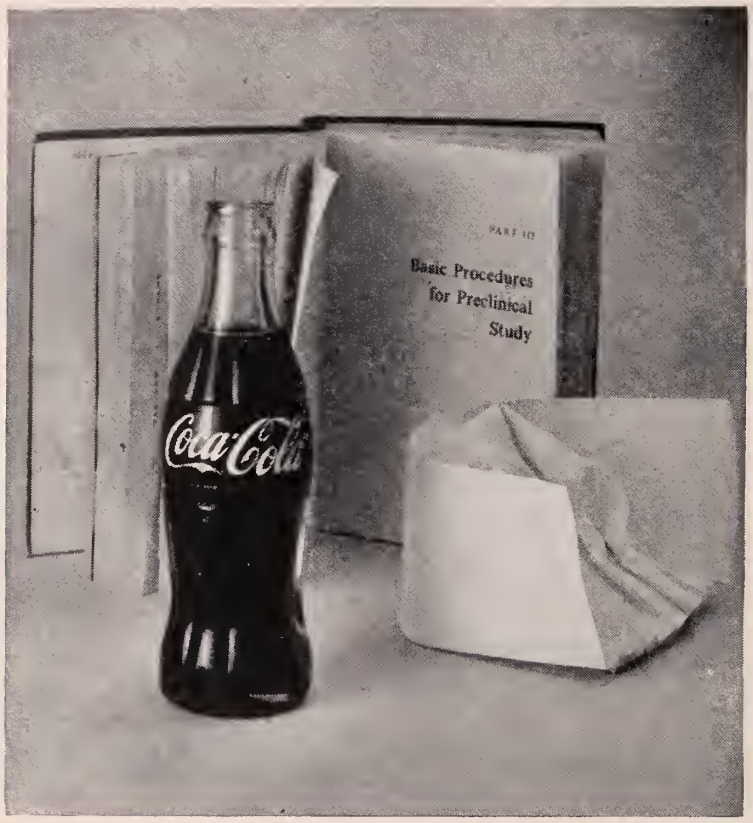
Diarrhea has been reported occasionally following heavy dosage. If this occurs, lengthen the interval between dosages.

If superinfection occurs during therapy, appropriate measures should be taken. Since some strains of staphylococci are resistant to SYNCILLIN as well as to other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment. As is true with all antibiotics, clinical response does not always correlate with laboratory bacterial sensitivity reports.

Supply: 125 and 250 mg. tablets, bottles of 25 and 100. 125 mg. powder for oral solution, 60 ml. vials.

References: 1. Wright, W. W.: Microbiology Report to Bristol Laboratories Inc. 2. Morigi, E. M. E.; Wheatley, W. B., and Albright, H.: Paper presented at the Seventh Antibiotic Symposium, November 4-6, 1959, Washington, D.C. 3. Editorial: New England J. Med. **261**:305 (Aug. 6) 1959. 4. King, A.: Lancet **1**:651 (March 29) 1958. 5. Epstein, E.: J.A.M.A. **169**:1055 (March 7) 1959. 6. Eagle, H. and Musselman, A. D.: J. Bact. **58**:475, 1949.

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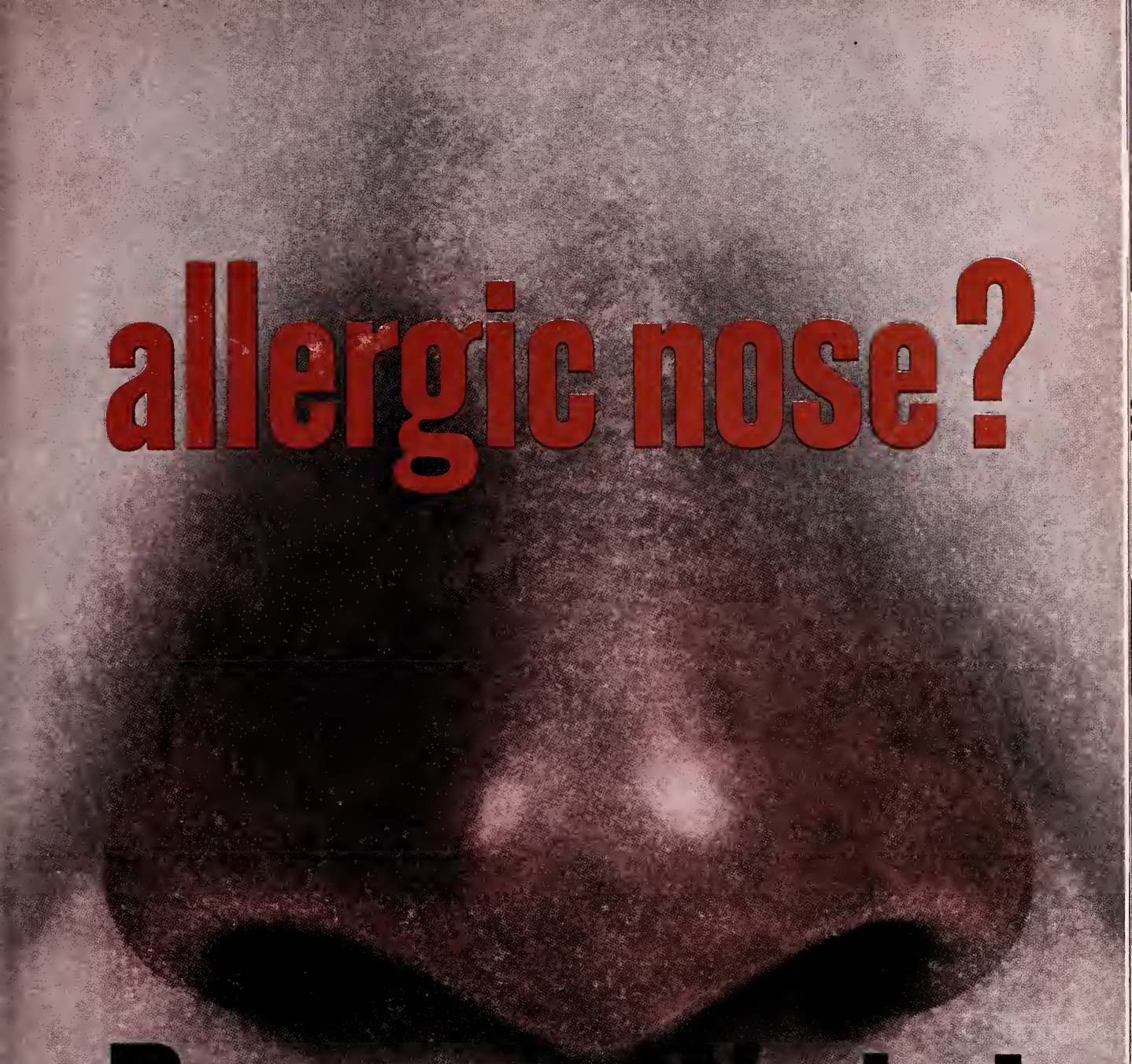


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Ames Company, Inc. ---- Inside Back Cover
Appalachian Hall ---- 51
Brayten ---- 41
Bristol ---- 14-15, 22, 86-89
Burroughs Wellcome Co. ---- 34
Ciba ---- 23, 85
Coca-Cola ---- 90
Davies, Rose & Company, Limited ---- 8
Desitin Chemical Company ---- 84
Dyer, David A., Insurance ---- 18
Eli Lilly and Company ---- 46
Gill Memorial Eye, Ear and Throat Hospital, Inc. ---- 49
Geigy ---- 13, 58
Jefferson, A. G. ---- 59
Johnston-Willis Hospital ---- 54
Jones and Vaughan ---- 7
Lederle ---- 12, 16-17, 32-33, 55, 56, 59, 62, 67, 70-71, 72
Lorillard ---- 42
Mayrand, Inc. ---- 28
Medicine in Virginia ---- 54
Merck Sharp & Dohme ---- 5, 29, 69
Parke, Davis & Company ---- Second Cover-3
People's Service Drug Stores ---- 77
Pfizer Laboratories ---- 37, 78
Physician's Products Co. ---- 36
Pitman-Moore ---- 40
Plyler's Nursing Home, Mrs. ---- 52
Raleigh Hotel ---- 55
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital ---- 48
Richmond Hotels Incorporated ---- 56
Riverside Convalescent Home ---- 48
Robins, A. H. Company ---- 39, 91
Roche Laboratories ---- 82-83
Roerig ---- 30-31, 61, 92
Sanborn ---- 38
Saint Albans ---- 50
Sardeau ---- 80
Schering ---- 6, 45, 56, 59
Schieffelin ---- 72
Searle ---- 47
Smith-Dorsey ---- 25
Smith Kline & French Laboratories ---- Back Cover
Squibb ---- 26, 35, 66
St. Elizabeth's Hospital ---- 51
St. Luke's Hospital ---- 52
St. Paul-Western Insurance Companies ---- 57
State Board of Medical Examiners, The ---- 54
Stuart Circle Hospital ---- 50
Terrace Hill Nursing Home ---- 55
Tucker Hospital, Inc. ---- 54
United States Brewers Foundation ---- 60
U. S. Vitamin and Pharmaceutical Corp. ---- 64-65
Vale Chemical Co. ---- 24, 68
Valentine Company, Inc. ---- 72
Wallace Laboratories ---- 19-20, 21, 27, 63, 81
Wayne Office Supply ---- 79
Wesson Oil ---- 10-11
Westbrook Sanatorium ---- 49
White Cross Hospital ---- 53
Williams Printings Co. ---- 57
Winthrop Laboratories ---- 9, 43-44, 73-76



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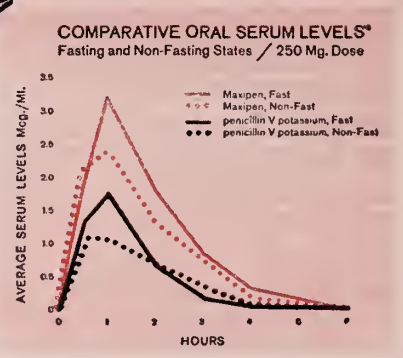
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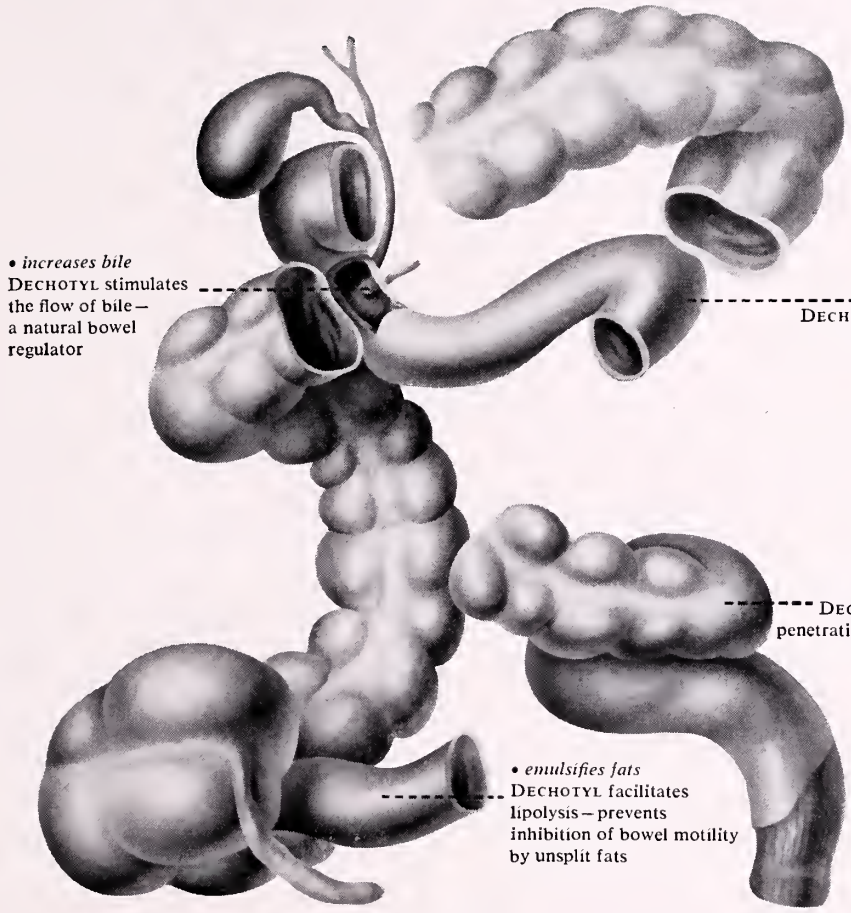
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TABLE OF CONTENTS

GUEST EDITORIAL

A Doctor Speaks to a Legislative Committee in Regard to the Implied Consent Law and to Driving While Affected by Alcohol—*Fletcher D. Woodward, M.D.* ---------- 227

ORIGINAL ARTICLE

Surgeons and Surgical Care of the Confederate States Army —*Richard Boies Stark, M.D.* ---------- 230

PUBLIC HEALTH

The Use of Atomic Energy in Industry ---------- 242

MENTAL HEALTH

The Nature and Action of Tranquilizers in Psychiatry ---- 244

PRE-PAID MEDICAL CARE

Control and Regulation ---------- 248

THE MEDICAL SOCIETY OF VIRGINIA

Membership Roster ---------- 250

WOMAN'S AUXILIARY ---------- 287

MISCELLANEOUS

Forand Bill ---------- 289

EDITORIAL

The Care of the Terminal Cancer Patient—
Harry J. Warthen, M.D. ---------- 291

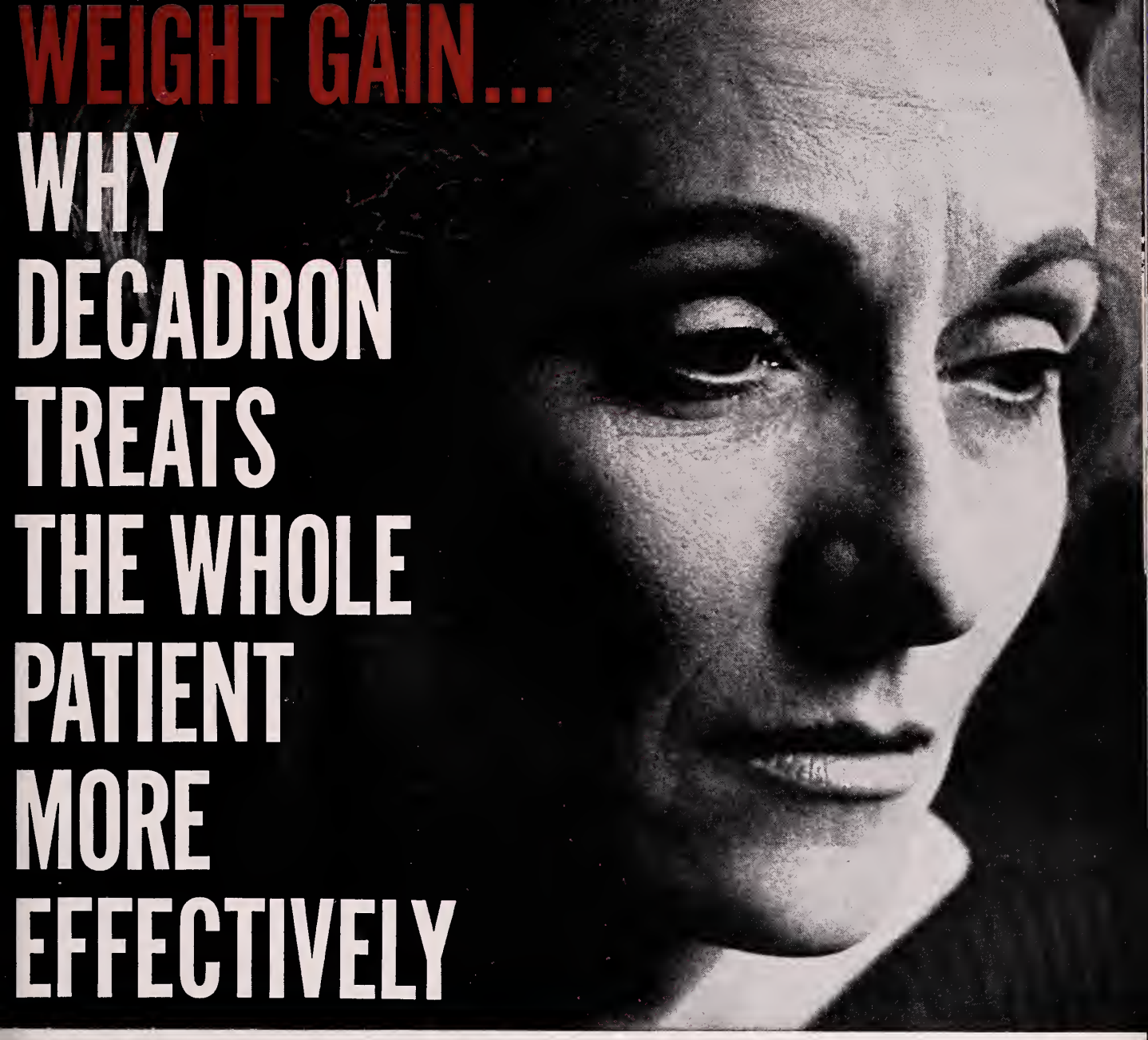
NEWS NOTES ---------- 293

OBITUARIES ---------- 295

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Maximal Flexibility

May be administered without regard to meals. However, highest absorption is achieved when taken just before or between meals.

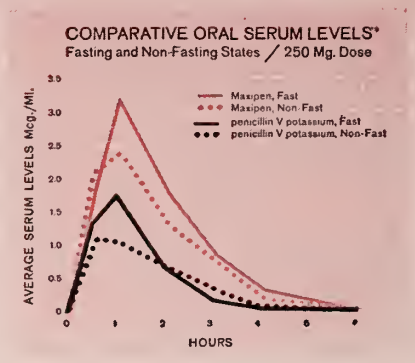
Maximal Oral Indications

Indicated in infections caused by streptococci, pneumococci, susceptible staphylococci, and gonococci

DOSAGE: For moderately severe conditions, 125 to 250 mg. three times daily. For more severe conditions, 500 mg. as often as every four hours around the clock.

NOTE: To date, MAXIPEN has not shown less allergic reactions than older oral penicillins. Usual precautions regarding penicillin administration should be observed.

SUPPLIED: MAXIPEN TABLETS, scored, 125 mg. (200,000 units), bottles of 36; 250 mg. (400,000 units), bottles of 24 and 100 tablets. MAXIPEN FOR ORAL SOLUTION; reconstituted each 5 cc. contains 125 mg. (200,000 units), in 60 cc. bottles.

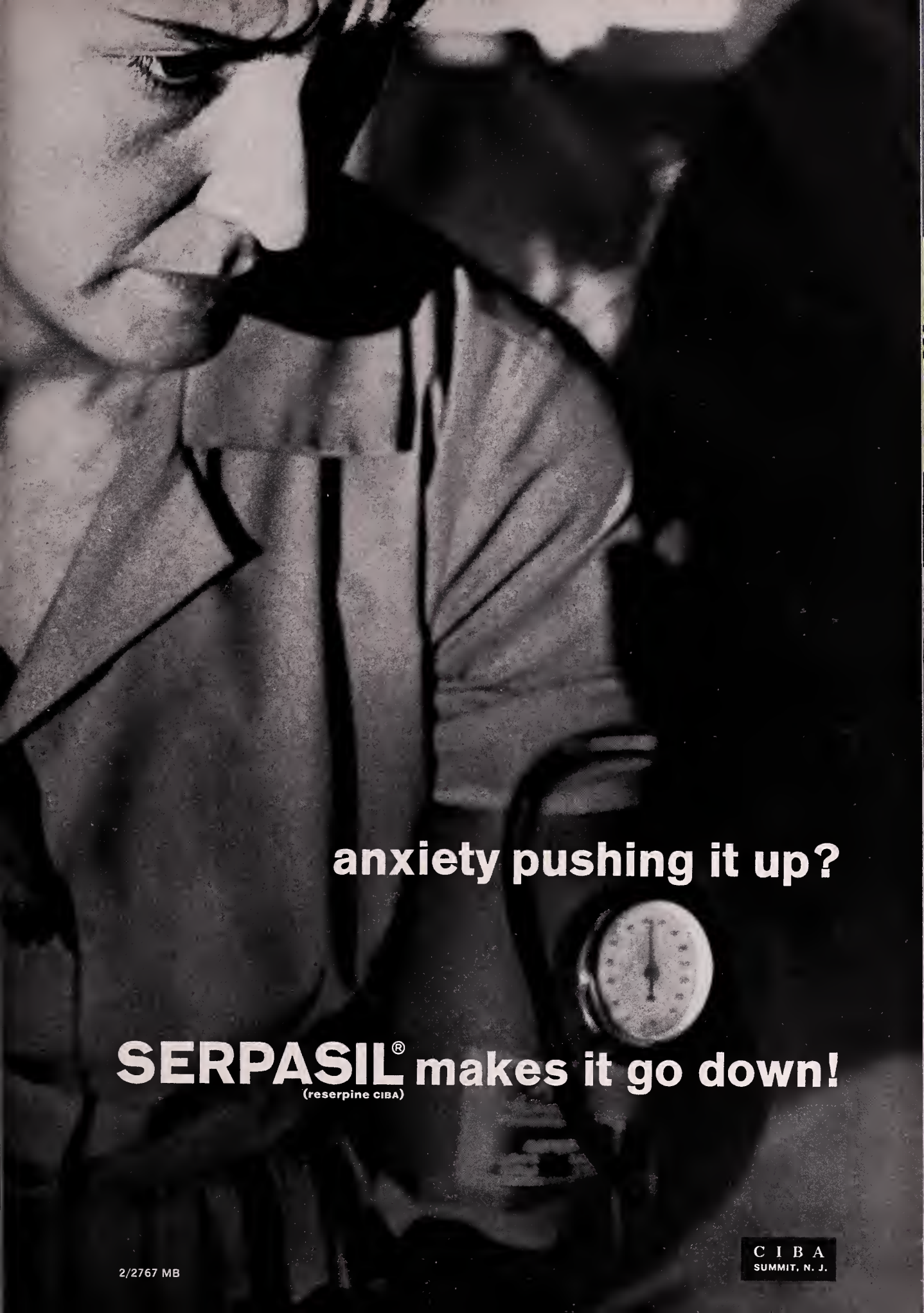


*Based on 3294 individual serum antibiotic determinations. Complete details available on request.

MAXIPEN, the orally maximal penicillin, is a triumph of man over molecule; a product of Pfizer Research

ROERIG Rx

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Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being


anxiety pushing it up?
SERPASIL®
(reserpine CIBA)
makes it go down!
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CIBA
SUMMIT, N. J.

The first synthetic penicillin available for general clinical use

FOR YOUR NEXT PATIENT WHERE PENICILLIN IS INDICATED .

SYNC

PEAK BLOOD LEVELS HIGHER THAN POTASSIUM PENICILLIN V

ORAL ROUTE PROVIDES HIGHER INITIAL PEAK BLOOD LEVELS THAN INTRAMUSCULAR PENICILLIN G

IMPROVED ANTIBIOTIC ACTION FROM ISOMERIC COMPLEMENTARITY

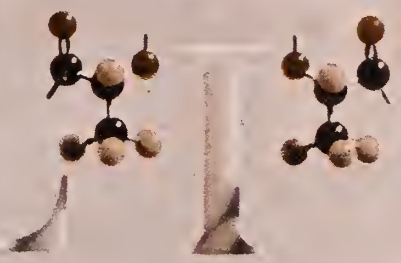
SUPPLY: SYNCILLIN TABLETS–250 mg. and SYNCILLIN TABLETS–125 mg.
SYNCILLIN FOR ORAL SOLUTION–60 ml. bottles–when reconstituted, 125 mg. per 5 ml.
SYNCILLIN FOR PEDIATRIC DROPS–1.5 Gm. bottles. Calibrated dropper delivers 125 mg.





CONSIDER THESE 6 IMPORTANT THERAPEUTIC ATTRIBUTES OF

V-CILLIN™



potassium phenethicillin (POTASSIUM PENICILLIN-152)

ANTIBIOTIC ACTIVITY DIRECTLY PROPORTIONAL TO ORAL DOSE

REDUCED RATE OF INACTIVATION BY STAPH PENICILLINASE

SOME STAPH STRAINS MORE SENSITIVE TO SYNCILLIN IN VITRO

BRISTOL LABORATORIES, SYRACUSE, NEW YORK

BRISTOL

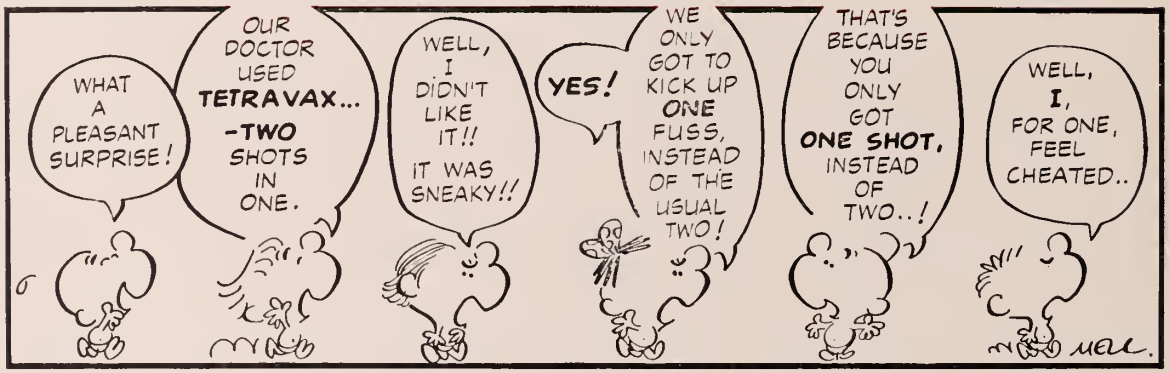




FOR SIMULTANEOUS IMMUNIZATION AGAINST 4 DISEASES:

Poliomyelitis-Diphtheria-Pertussis-Tetanus

PEDI-ANTICS



TETRAVAX®

DIPHTHERIA AND TETANUS TOXOIDS WITH PERTUSSIS AND POLIOMYELITIS VACCINES

now you can immunize against more *diseases...with* fewer *injections*

Dose: 1 cc.
Supplied: 9 cc. vials in *clear plastic* cartons. Package circular and material in vial can be examined without damaging carton. Expiration date is on vial for checking even if carton is discarded.



For additional information, write Professional Services, Merck Sharp & Dohme, West Point, Pa.

TETRAVAX IS A TRADEMARK OF MERCK & CO., INC.

MERCK SHARP & DOHME, DIVISION OF MERCK & CO., INC., WEST POINT, PA.

Tofrānil®

brand of imipramine HCl

in depression

lights the road to recovery in 80 per cent of cases

In the treatment of depression Tofrānil has established the remarkable record of producing remission or improvement in approximately 80 per cent of cases.[1-7]

Tofrānil is well tolerated in usage—is adaptable to either office or hospital practice—is administrable by either oral or intramuscular routes.

Tofrānil
a potent thymoleptic . . .
not a MAO inhibitor.

Does act effectively in *all* types of depression regardless of severity or chronicity.

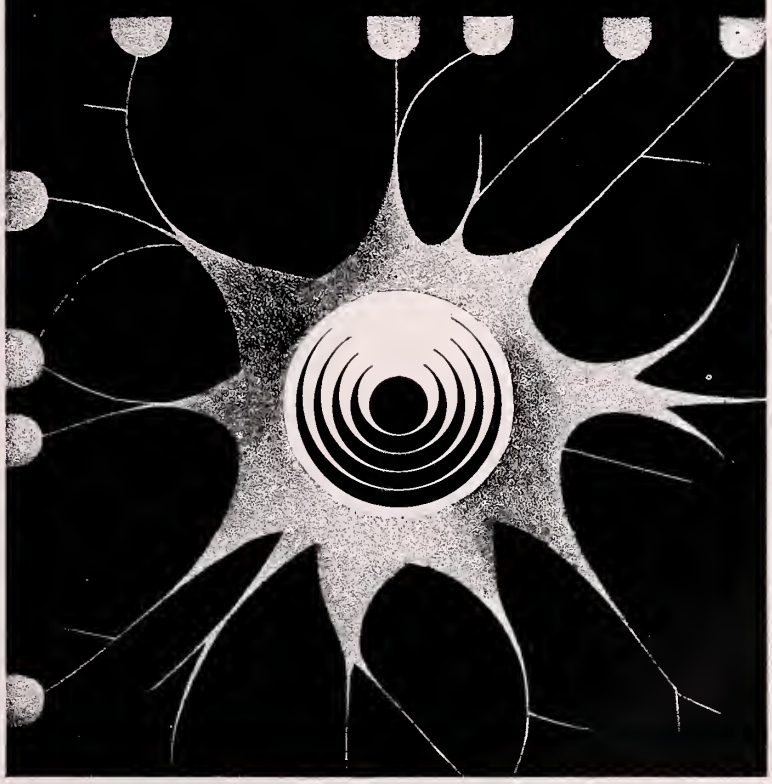
Does not inhibit monoamine oxidase in brain or liver; produce CNS stimulation; or potentiate other drugs such as barbiturates and alcohol.

Detailed Literature Available on Request.

Tofrānil® brand of imipramine HCl: tablets of 25 mg., bottles of 100. Ampuls for intramuscular administration only, each containing 25 mg. in 2 cc. of solution, cartons of 10 and 50.

References: 1. Ayd, F. J., Jr.: Bull. School Med., Univ. Maryland *44*:29, 1959. 2. Azima, H., and Vispo, R. H.: A.M.A. Arch. Neurol. & Psychiat. *81*:658, 1959. 3. Lehmann, H. E.; Cahn, C. H., and de Verteuil, R. L.: Canad. Psychiat. A. J. *3*:155, 1958. 4. Mann, A. M. and MacPherson, A. S.: Canad. Psychiat. A. J. *4*:38, 1959. 5. Sloane, R. B.; Habib, A., and Batt, U. E.: Canad. M.A.J. *80*:540, 1959. 6. Straker, M.: Canad. M.A.J. *80*:546, 1959. 7. Strauss, H.: New York J. Med. *59*:2906, 1959.

Geigy, Ardsley, New York



Geigy

TO4-60

wherever there is inflammation, swelling, pain

VARIDASE®

Streptokinase-Streptodornase Lederle

BUCCAL Tablets

conditions for a fast & comfortable comeback

Host reaction to injury or local infection has a catabolic and an anabolic phase. The body responds with inflammation, swelling and pain. In time, the process is reversed. VARIDASE speeds up this normal process of recovery. By activating fibrinolytic factors VARIDASE shortens the *undesirable phase,* limits necrotic changes due to inflammatory infiltration, and initiates the constructive phase to speed total remission. Medication and body defenses can readily penetrate to the affected site; local tissue is prepared for faster regrowth of cells. In infection, the fibrin wall is breached while the infection-limiting effect is retained. In acute cases, response is often dramatic. In chronic cases, VARIDASE Buccal Tablets can stimulate a successful response to primary therapy previously considered inadequate or failing.

for routine use in injury and infection
...new simple buccal route

VARIDASE Buccal Tablets should be retained in the buccal pouch until dissolved. For maximum absorption, patient should delay swallowing saliva.
Dosage: One tablet four times daily usually for five days. When infection is present, VARIDASE Buccal Tablets should be given in conjunction with ACHROMYCIN® V Tetracycline with Citric Acid.
Each VARIDASE Buccal Tablet contains: 10,000 Units Streptokinase and 2,500 Units Streptodornase.
Supplied: boxes of 24 and 100 tablets.

1. Innerfield, I.: Clinical report cited with permission
2. Clinical report cited with permission

Lederle LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY
Pearl River, New York



FORCE INJURY

severe bruises ... swelling ... cleared by fifth day[2]





VARICOSE ULCER

15 years duration ... resolved with VARIDASE[1]





INFLAMMATORY DERMATOSIS

rapidly spreading rhus dermatitis healed within a week[1]





INFECTED LACERATION

marked reversal in 3 days... returned to school... closure advanced[1]





THROMBOPHLEBITIS

back on his feet in a week after recurrent episode[1]



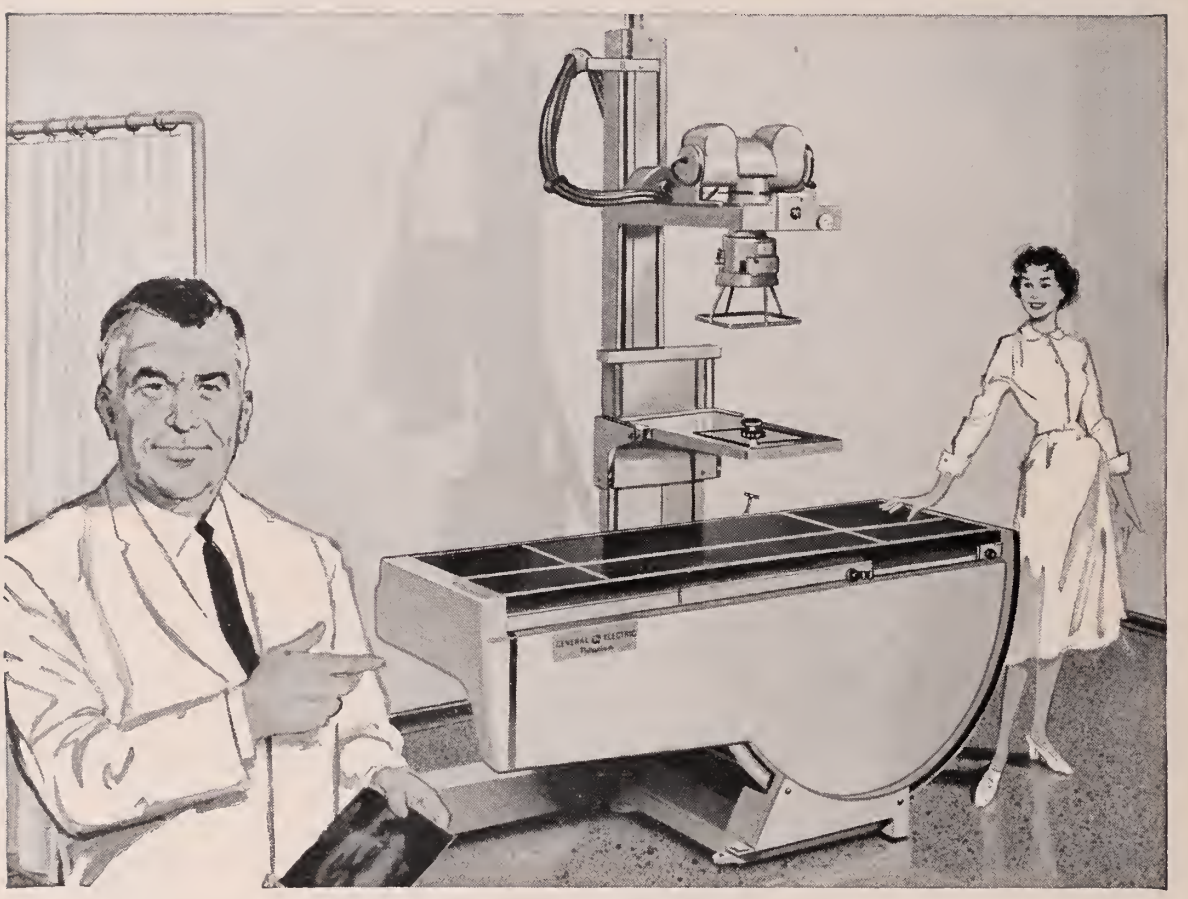


REFRACTORY CELLULITIS

normal routine resumed after 4 days of VARIDASE[1]



The choice of confidence...



diagnostic x-ray equipment planned for private practice!

Few who purchase x-ray equipment have time to thoroughly test the quality of materials, workmanship and technical performance offered by all the makes of x-ray units. And happily this is not necessary.

The manufacturer's *reputation* is worth more than anything else to you in choosing x-ray equipment, one of the most complex professional investments you will ever face.

General Electric has created "just what the doctor ordered" in the 200-ma Patrician, in terms of both reasonable cost and operating qualities. Here diagnostic x-ray is ideally tailored to *private practice.* Patrician provides everything you need for radiography and fluoroscopy — and with consistent end results, since precise radiographic calibration is as much a part of the Patrician combination as it is of our most elaborate installations. For complete details contact your G-E x-ray representative listed below.

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she calls it "nervous indigestion"

diagnosis: a wrought-up patient with a functional gastro-intestinal disorder compounded by inadequate digestion. **treatment:** reassurance first, then medication to relieve the gastric symptoms, calm the emotions, and enhance the digestive process. **prescription:** new Donnazyme—providing the multiple actions of widely accepted Donnatal® and Entozyme®—two tablets t.i.d., or as necessary.

Each Donnazyme tablet contains
—In the gastric-soluble outer layer: Hyoscyamine sulfate, 0.0518 mg.; Atropine sulfate, 0.0097 mg.; Hyoscine hydrobromide, 0.0033 mg.; Phenobarbital (1/8 gr.), 8.1 mg.; and Pepsin, N. F., 150 mg. **In the enteric-coated core:** Pancreatin, N. F., 300 mg., and Bile salts, 150 mg.

ANTISPASMODIC - SEDATIVE - DIGESTANT

DONNAZYME®

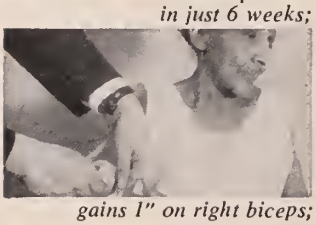
A. H. ROBINS COMPANY, INCORPORATED • RICHMOND 20, VIRGINIA

New Dianabol converts protein to working weight in wasting or debilitated patients

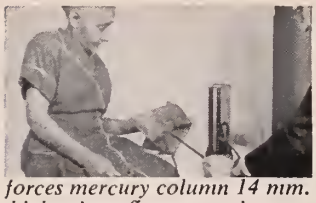
Mrs. M. R., 75-year-old underweight patient:



Puts on 13¼ needed pounds in just 6 weeks;



gains 1" on right biceps;



forces mercury column 14 mm. higher in cuff-compression test of muscle strength;



feels better than she has in 2 years.

Photos used with permission of the patient.

Dianabol is a new tissue-building agent with distinct advantages over previous compounds of this type.

By aiding the deposition, synthesis, and utilization of protein, Dianabol affords these benefits in the underweight elderly patients with or without serious disease and in patients who are chronically ill or convalescent:

- Rebuilds tissue and improves appetite, thus promoting lean weight gain.
- Restores tone to weak, flabby musculature.
- Speeds healing of wounds; hastens postoperative recovery and convalescence from a variety of diseases.
- Strengthens skeletal structure; often relieves pain and increases mobility in osteoporosis.
- Improves general physical status; helps to revive a sense of well-being.

Economical, convenient to administer, and almost without virilizing effects, Dianabol overcomes the disadvantages that have restricted use of tissue-building compounds in the past. Older patients, whose funds are often limited, will particularly welcome the low cost of Dianabol therapy—in most cases only 9 to 17 cents a day.

Complete information available on request.
SUPPLIED: *Tablets,* 5 mg. (pink, scored); bottles of 100.



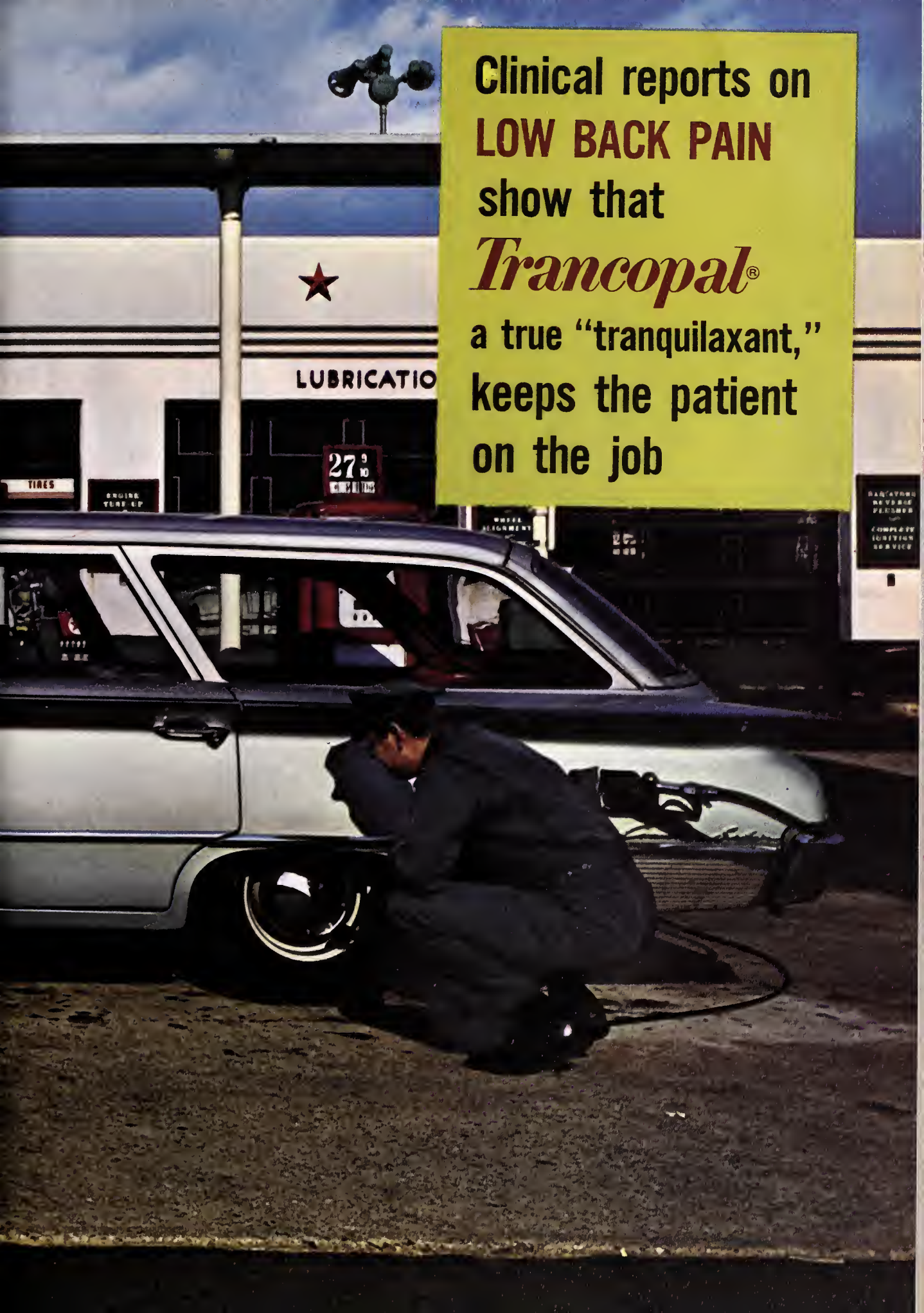
Dianabol®
(methandrostenolone CIBA)

New, orally effective tissue builder

Converts protein to working weight in wasting or debilitated patients

CIBA
SUMMIT, NEW JERSEY

2/2788MB



Clinical reports on LOW BACK PAIN show that *Trancopal*®

a true "tranquilaxant," keeps the patient on the job

A TRUE "TRANQUILAXANT"

Trancopal®



relaxes skeletal muscle spasm so the patient can continue to work

Clinical experience shows that Trancopal will enable your patients with low back pain to keep going strong. Lichtman[1] reports that 310 of his 331 patients treated with Trancopal obtained satisfactory relief. These patients were suffering from low back pain, stiff neck, postoperative muscle spasm or other skeletal muscle spasms associated with trauma, bursitis, osteoarthritis and rheumatoid arthritis. Mullin and Epifano[2] reported that Trancopal brought relief to all of 39 patients with skeletal muscle spasm. In these patients, who had suffered from trauma, bursitis, rheumatoid arthritis, osteoarthritis, and intervertebral disc syndrome, the effect of Trancopal was ". . . excellent and prompt . . ."[2] Gruenberg[3] obtained marked relief with Trancopal in 258 of 304 patients with low back pain, torticollis, arthritis and other conditions associated with skeletal muscle spasm. Moderate relief was obtained in an additional group of 28 patients. Trancopal is a true "tranquilaxant" because "It combines the properties of tranquilization and skeletal muscle relaxation with no concomitant change in normal consciousness."[4] Side effects have been few and minor — and in no case were they serious enough to warrant discontinuing the use of Trancopal.[1] "Trancopal is exceptionally safe for clinical use."[3]

relieves anxiety and tension so the patient can carry on



Trancopal is also an effective agent for patients in anxiety and tension states. According to recent clinical reports,[1,5] it calms the patients but allows them to continue their work or other activity. Indeed, Lichtman found that his patients with anxiety ". . . were in many instances able to continue their normal activities where previously they had been considerably restricted . . ."[1] He observed that Trancopal brought good to excellent relief to 114 of 120 patients in anxiety states. Ganz,[5] who noted good to excellent relief in 32 of 35 patients with globus hystericus, and in his entire series of 100 patients in anxiety or tension states, comments: "Chlormethazanone [Trancopal], by relieving the psychogenic symptoms, allows the patient to use his energies in a more productive manner in overcoming his basic problems."[5]

Relieves dysmenorrhea — Trancopal has also proved to be a useful medication in the treatment of patients with dysmenorrhea,[1,4,6] probably producing its effect ". . . by means of a combination of muscle relaxant and tranquilizing actions."[4]

Indications

Musculoskeletal disorders		Psychogenic disorders
Low back pain (lumbago)	Ankle sprain, tennis elbow	Dysmenorrhea
Neck pain (torticollis)	Osteoarthritis	Premenstrual tension
Bursitis	Rheumatoid arthritis	Anxiety and tension states
Fibrositis	Disc syndrome	Asthma
Myositis	Postoperative muscle spasm	Angina pectoris
		Alcoholism

Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms generally occurs promptly and lasts from four to six hours.

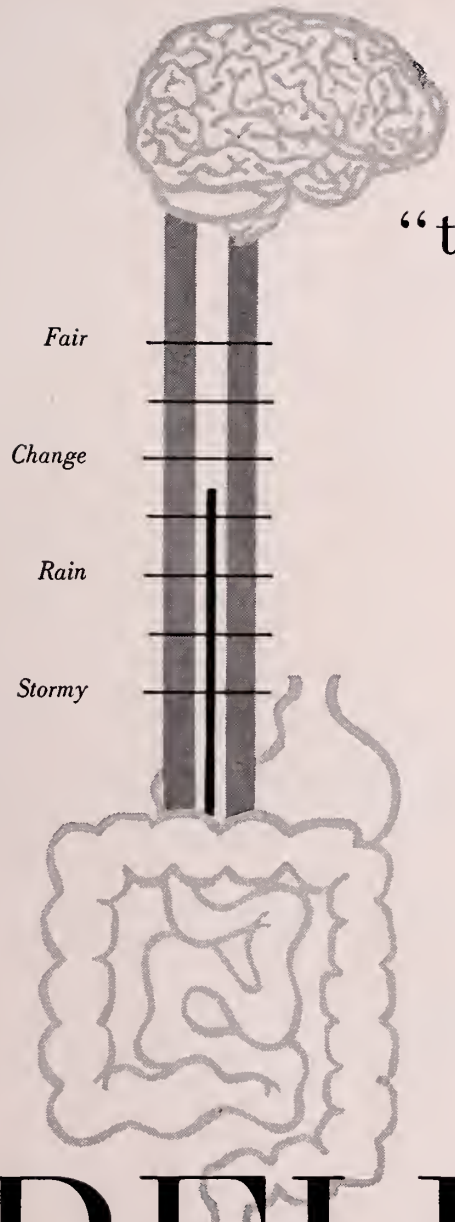
How Supplied: Trancopal Caplets® 100 mg. (peach colored, scored) and 200 mg. (green colored, scored), bottles of 100.

References: 1. Lichtman, A. L.: Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958. 2. Mullin, W. G., and Epifano, Leonard: Am. Pract. & Digest Treat. 10:1743, Oct., 1959. 3. Gruenberg, Friedrich: Current Therap. Res. 2:1, Jan., 1960. 4. Shanaphy, J. F.: Current Therap. Res. 1:59, Oct., 1959. 5. Ganz, S. E.: J. Indiana M. A. 52:1134, July, 1959. 6. Stough, A. R.: J. Oklahoma M. A. 52:575, Sept., 1959.

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TRANCOPAL (BRAND OF CHLORMEZANONE) AND CAPLETS, TRADEMARKS REG. U. S. PAT. OFF.


clinical reports on anxiety show that
A TRUE "TRANQUILAXANT"
Trancopal
quiets the psyche but leaves the patient alert
"...TRANCOPAL is a most valuable drug for relieving tension, apprehension and various psychogenic states."5
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"the G-I tract is the barometer of the mind..."

Belbarb soothes the agitated mind and calms the G-I spasm through the central effect of phenobarbital and the synergistic action of fixed proportions of natural belladonna alkaloids on the gastrointestinal tract.

BELBARB

SEDATIVE ANTISPASMODIC

20 years of clinical satisfaction

Belbarb No. 1; Belbarb No. 2; Belbarb Elixir; Belbarb-B

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51 to 49...it's a boy!





94 to 6 BONADOXIN® stops morning sickness

When she asks "Doctor, what will it be?" you can either flip a coin or point out that 51.25% births are male.[1] But when she mentions morning sickness, your course is clear: BONADOXIN.

For, in a series of 766 cases of morning sickness, seven investigators report excellent to good results in 94%.[2] More than 60 million of these tiny tablets have been taken. The formula: 25 mg. Meclizine HCl (for antinauseant action) and 50 mg. Pyridoxine HCl (for metabolic replacement). Just one tablet the night before is usually enough.

BONADOXIN—DROPS and Tablets—are also effective in infant colic, motion sickness, labyrinthitis, Meniere's syndrome and for relieving the nausea and vomiting associated with anesthesia and radiation sickness. See PDR p. 795.

1. Projection from Vital Statistics, U.S. Government Dept. HEW, Vol. 48, No. 14, 1958, p. 398.
2. Modell, W.: Drugs of Choice 1958-1959, St. Louis. C. V. Mosby Company, 1958, p. 347.

Rx ROERIG

New York 17, New York
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being



Geriatric and chronically ill patients respond within a few days. Thanks to your prompt treatment and the smooth action of Deprol, her depression is relieved and her anxiety calmed—*often in two or three days.* She eats well, sleeps well and her depression no longer complicates your basic regimen.

Lifts depression...as it calms anxiety!

For geriatric and chronically ill patients— a smooth, balanced action that lifts depression as it calms anxiety...rapidly and safely

Balances the mood—no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient—*they often aggravate anxiety and tension.* And although amphetamine-barbiturate combinations may counteract excessive stimulation—*they often deepen depression.*

In contrast to such "seesaw" effects, Deprol lifts depression as it calms anxiety.

Acts swiftly—the patient often feels better, sleeps better, within two or three days. Unlike most other antidepressant drugs, Deprol relieves the patient quickly—often within two or three days.

Acts safely—no danger of hypotension or liver damage. Deprol does not cause hypotension, tachycardia, jitteriness, or liver toxicity. It can be safely administered with basic therapies.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be gradually increased up to 3 tablets q.i.d.
Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.
Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.

▲Deprol▲®

WALLACE LABORATORIES
New Brunswick, N. J.

CO-761



Flavorful fare your patient will welcome!

The secret of a successful high protein diet is acceptance

The acceptance of *any* diet depends on its appetite appeal. Your high protein diet patients should find these dishes both tempting—*and* economical . . . like the fluffy omelet above, folded over penny-sliced frankfurters. Ground meat, flaked fish or cheese are also rich (but inexpensive) sources of protein.

A mixed green salad topped generously with thinly sliced shoestrings of meat and cheese is a delicious dish, as is cottage cheese, served as a salad or spread on dark bread. And egg white whipped into fruit juice makes a frothy flip—while an assortment of fruit and cheese makes a satisfying dessert.



With your approval, a glass of beer can add zest to your patient's diet.

Protein, 0.8 grm.; calories, 104/8 oz. glass (Average of American Beers)

United States Brewers Foundation

If you'd like reprints of this and 11 other different diet menus for your patients, write United States Brewers Foundation, 535 Fifth Avenue, N.Y. 17, N.Y.



when sulfa is your plan of therapy... KYNEX is your drug of choice

OUTSTANDING 1-DOSE-A-DAY SULFA—*Rapid peak attainment* in 1 to 2 hours[1,2]... approximately one-half the time of other single-daily dose sulfas.[2] *High free levels*—as much as 95 per cent of circulating levels remaining in fully active unconjugated forms.[3] *Extremely low 2.7 per cent incidence of side effects* in a clinical study on 223 patients.[4] Includes *total* reactions (subjective and objective), all temporary and rapidly reversed. No crystalluria reported.

KYNEX Tablets, 0.5 Gm., bottles of 24 and 100. Dosage: Adults. 0.5 Gm. (1 tablet) daily following an initial first day dose of 1 Gm. (2 tablets).

KYNEX Acetyl Pediatric Suspension, cherry-flavored, 250 mg. sulfamethoxypyridazine activity per tsp. (5 cc.). Bottles of 4 and 16 fl. oz.

New for acute G. U. infection AZO KYNEX Tablets (for q. i. d. dosage), 125 mg. KYNEX sulfamethoxypyridazine in the shell with 150 mg. phenylazodiaminopyridine HCl in the core.

KYNEX®

Sulfamethoxypyridazine Lederle

1. Boger, W. P.; Strickland, C. S., and Gylfe, J. M.: Antibiotic Med. & Clin. Ther. 3:378 (Nov.) 1956. 2. Boger, W. P.: In: Antibiotic Annual 1958-1959, Medical Encyclopedia, Inc., New York, 1959, p. 48. 3. Sheth, U. K.; Kulkarni, B. S., and Kamath, P. G.: Antibiotic Med. & Clin. Ther. 5:604 (Oct.) 1958. 4. Anderson, P. C., and Wissinger, H. A.: U. S. Armed Forces M. J. 10:1051 (Sept.) 1959.

Lederle **LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y.**


THIS IS
THE
TABLET



ALPEN is the oral penicillin that provides on a fasting stomach peak antibiotic blood levels approximately twice as high as oral potassium penicillin V... and significantly higher than I. M. penicillin G.

Some strains of staphylococci resistant to other penicillins exhibit in vitro sensitivity to potassium phenethicillin.

ALPEN has greater freedom from the G. I. sequelae (overgrowth of resistant flora) sometimes observed with broad spectrum -mycins.

ALPEN gives much higher antibiotic levels within the first hour of ingestion by the well-tolerated oral route.

WHEN TO USE ALPEN Recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci.

HOW TO USE ALPEN Depending on the severity of the infection, 125 mg. (200,000 units) or 250 mg. (400,000 units) three times daily may be used. In more severe or stubborn infections, a dosage of 500 mg. (800,000 units) t.i.d. may be employed. In beta hemolytic streptococcal infections, treatment should be continued for at least ten days.

PRECAUTIONS The usual precautions in the administration of oral penicillin should be observed. For further details see package literature.

Tablets: 125 mg. and 250 mg., bottles of 25 and 100. Powder for Oral Solution (lemon-lime flavored), 1.5 Gm. bottle (125 mg. per 5 cc. teaspoonful).

this is the tablet that gives higher peak antibiotic blood levels

HIGHER THAN I. M. PENICILLIN G
HIGHER THAN POTASSIUM PENICILLIN V

ALPEN

ALPEN™—potassium phenethicillin

Schering

LEPTINOL·



Dispel the clouds of sunset years

Write for descriptive literature
Clinical trial samples available

Each Bi-layer tablet contains:

Pentylenetetrazol . . .	100 mg.
Niacin	50 mg.
Thiamine Hydrochloride	1 mg.
Ascorbic Acid	20 mg.

Dose: One or two tablets, three times daily.

LEPTINOL is a safe central nervous stimulant. LEPTINOL is highly effective in confused states of elderly patients. Incipient psychosis of senility, with its warning symptoms of loss of interest, egocentricity, hypochondriasis, insecurity and intolerance can frequently be ameliorated.

Even in the presence of degenerative organic pathology, LEPTINOL can markedly alleviate many of the mentally disturbing symptoms.

LEPTINOL has a very high index of therapeutic safety, with no liability of addiction or tolerance, virtually no contra-indications.

Primary action is a positive stimulation of the medulla, more pronounced in depressed states than in normal individuals. Higher brain centers are also stimulated, and to a lesser degree, the reflex activity of the cord.

THE VALE CHEMICAL CO., INC.
Allentown, Pennsylvania

VALE
Pharmaceuticals since 1922



Lifts depression...as it calms anxiety!

For pregnant, postpartum and menopausal patients—a smooth, balanced action that lifts depression as it calms anxiety...rapidly and safely

Balances the mood—no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient—*they often aggravate anxiety and tension.* And although amphetamine-barbiturate combinations may counteract excessive stimulation—*they often deepen depression.*

In contrast to such "seesaw" effects, Deprol lifts depression as it calms anxiety.

Acts swiftly—the patient often feels better, sleeps better, within two or three days. Unlike most other antidepressant drugs, Deprol relieves the patient quickly—often within two or three days.

Acts safely—no psychotic reactions. Deprol does not cause hypotension, tachycardia, jitteriness, or liver toxicity. It can be safely administered with basic therapy.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be gradually increased up to 3 tablets q.i.d.
Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.
Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.

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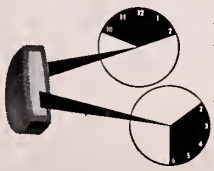
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References: 1. Fabricant, N. D.: E. E. N. T. Monthly 37:460 (July) 1958. 2. Lhotka, F. M.: Illinois M. J. 112:259 (Dec.) 1957. 3. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958. 4. Fuchs, M.; Bodi, T.; Mallen, S. R.; Hernando, L., and Moyer, J. H.: Antibiotic Med. & Clin. Ther. 7:37 (Jan.) 1960. 5. Halpern, S. R., and Rabinowitz, H.: Ann. Allergy 18:36 (Jan.) 1960.

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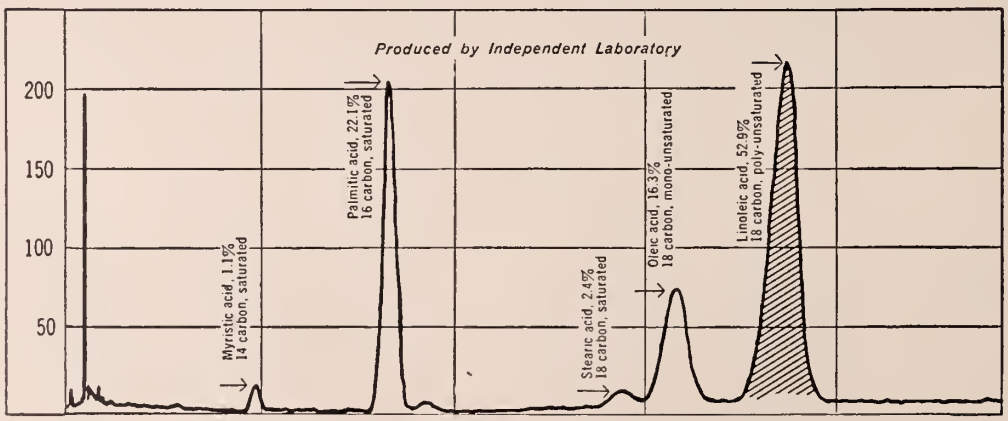
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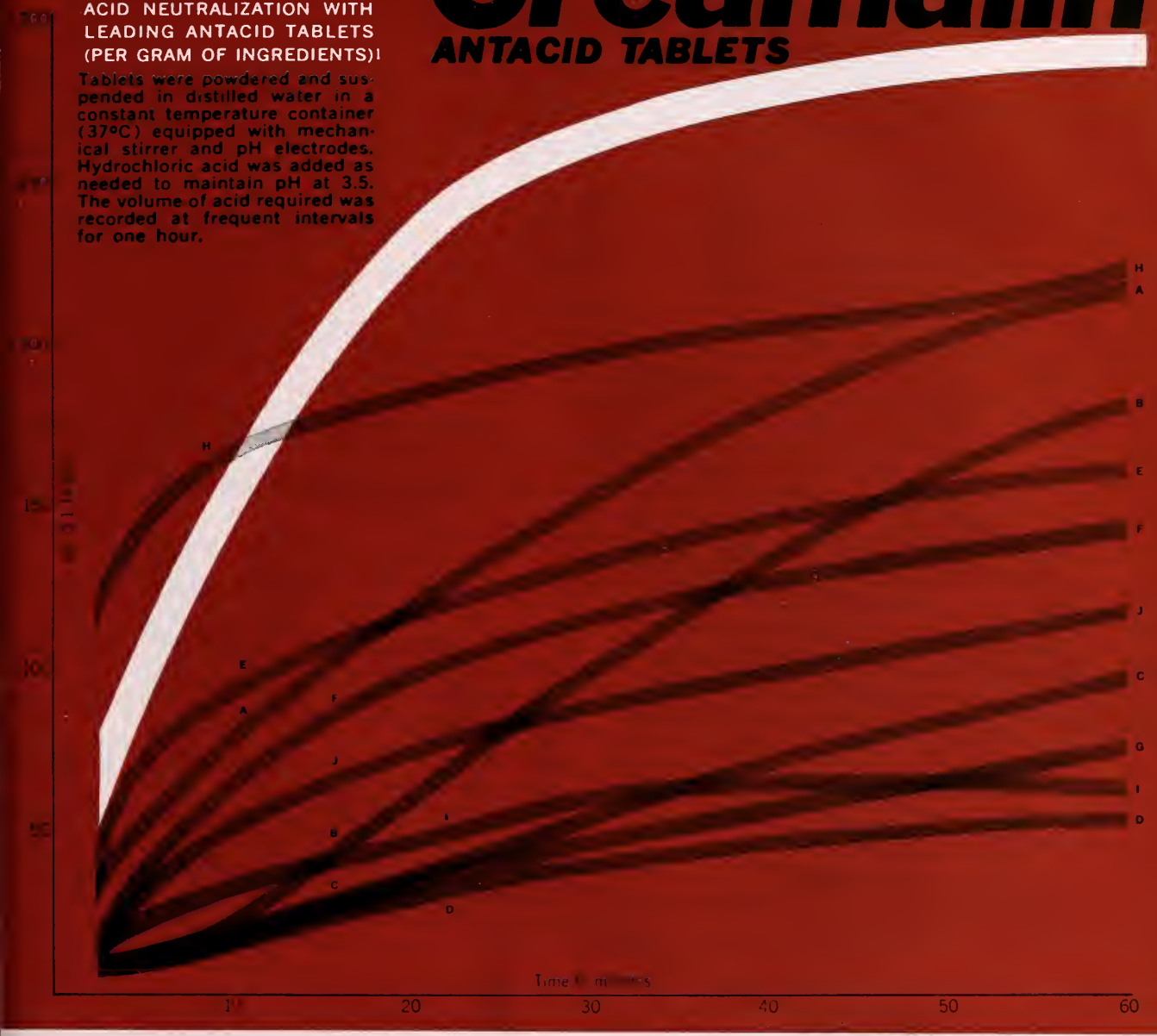


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1. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A. (Scient. Ed.)* 48:380, July, 1959. 2. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A. (Scient. Ed.)* 48:384, July, 1959.

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1. Griffith, R. S.: Comparison of Antibiotic Activity in Sera Following the Administration of Three Different Penicillins, Antibiotic Med. & Clin. Therapy, 7:No. 2 (February), 1960.

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The Virginia
MEDICAL
MONTHLY

May, 1960
Vol. 87, No. 5
Whole No. 1296

Guest Editorial....

A Doctor Speaks to a Legislative Committee in Regard to the Implied Consent Law and to Driving While Affected by Alcohol

I WOULD LIKE to address you as a physician and give our reasons for asking your support of the proposed implied consent law and the proposed lesser offense law of driving while affected by alcohol.

My interest in this problem goes back over many years and was brought about by the necessity and responsibility of repairing broken bodies of these victims of automobile accidents. The number of people killed and injured has been rising through the years until last year some 38,000 people died and some 5,000,000 people were injured as a result of automobile crashes. In other words, more people died on our highways than live in my home city of Charlottesville. More people were injured than live in my home State of Virginia. And, in 20% of those injured the injuries were classified as from severe to critical. Roughly 100 people a day die on the highways. In all of our wars less than 1,000,000 men have been killed. The automobile counted its one millionth victim some five years ago. This toll of death has risen so that today it ranks third in the cause of death in this country if figured on man years of life lost. The leading cause of death, cardiovascular disease, and the second cause, cancer, are primarily diseases of the older age groups whereas the automobile takes its toll largely among our youth. Most physicians feel today that it constitutes our number one health problem in this country.

This problem has been studied extensively and although basic research is necessary for the final answers we feel that today we have enough remedies which, if employed, would curtail this slaughter by 50% or more. In years past many epidemics have visited this world and in each instance they have been attacked with the tools and remedies which were then available and on each occasion they have been controlled. The same conditions exist today and we again believe that this epidemic can be controlled by applying the remedies which we now have.

The insurance companies, the legal profession, the police and the doctors all appreciate the magnitude of this problem. The public and its legislative representatives have yet to realize that this toll of death and injury can be curtailed. They still do not believe that such things can happen to them. Likewise, the slogans that are repeated

over the television and radio and seen in the newspapers fall on deaf ears. The public still believes that these things only happen to the other fellow. But, with the rising tide of such injuries and deaths it won't be long before enough families will have suffered a loss to enlist their help in this campaign.

In the meantime, the medical profession is busy trying to prepare a plan which can be followed when they are called upon to furnish it. The manufacturers themselves have been most negligent in any concerted effort along this line. They frankly say that they will not do anything until, and if, the public demands it.

What are the remedies that we offer?

1) We believe that education is the primary thing and that the State Board of Education should furnish instruction in driver education and behind-the-wheel instruction also to every child in every public, parochial and private school in this state. There they would be taught the dangers of driving while drinking and the importance of the use of seat belts. They should also be permitted to drive a care under license at the age of sixteen but should be denied that privilege until eighteen unless they can present a certificate from such a school.

2) The second great cause of death proves to be alcohol. We have found on statistical studies that 25% to 35% of all accidents involve a drinking driver and more than 50% of all fatal accidents involve a drinking driver. If we can curtail this one thing we will immediately have taken a great step forward in the prevention of death and injury.

To that end I would urge that you support the implied consent law which has been proposed. This gives the police officer the right to ask for a blood alcohol determination of a suspected individual, that is, one who is suspected of driving while under the influence of alcohol. As you know, this law has been adopted by some eight states and has been upheld in many courts. We also believe that the result of this blood test should be accepted as evidence and the determination of drunkenness not be decided by the judge or a consulting physician.

We also ask that you support a new law concerning the lesser offense of driving while affected by alcohol. This law would punish those with a level of .05 to .15% alcohol. Those with a blood level below .05 should go free. This level is reached in most instances by two one-ounce drinks of whiskey or two bottles of beer. Those with the blood alcohol level of .15 or higher, which is now accepted as the critical point but is a far too generous figure, are in the range of the drunken driver and represents anywhere from six to eight ounces of whiskey or six to eight bottles of beer. The present laws concerning the punishment of such an offender are proper but they should be mandatory, should carry a stiff fine and revocation of permit clause and a jail sentence. We also believe that if this offense is committed a second time there should be a permanent revocation of the license to drive. But, most of the accidents take place in the .05 to .15 zone, the range of the social drinker. The new law for the lesser offense is designed to take care of this range of intoxication.

Our reasons for asking for this new law governing the lesser offense are based on the experiments that individuals presenting a blood level of from .03 to .05% con-

sistently fail tests involving skill and judgment. In other words, the great majority fail such a test. Because of this we feel that anyone presenting a blood level of .05 is unsafe on the highway. Physicians are not concerned as to whether this alcohol blood level is reached on an ascending or descending curve of intoxication. They are not concerned with the kind or rate of consumption of the beverage. They are not concerned as to whether the individual is a toper or a novice. They are not concerned with whether it was consumed on a full or fasting stomach. The only thing that concerns us is the blood alcohol level which affects the brain. In other words, we all, as Kipling says, like the Colonel's lady and Judy O'Grady, are sisters under the skin.

We feel that if the case goes to a jury the verdict should be limited to "Guilty" or "Not Guilty". There should be provided a mandatory law to govern the punishment of people falling within this category. This law should be tough enough so that the fine would be one that hurts. The suspension of the driving permit should likewise be long enough to hurt. There should be a jail term provided, whether one day or ten, depending on the severity of the offense. There should be no suspension of any of these provisions.

If it is felt that .05 is too harsh then we could take .10 as a compromise. This represents four one-ounce drinks of whiskey or four bottles of beer before passing beyond the safe point, that is, for the average individual consuming this amount of whiskey or beer in an average period of time and under average conditions.

In order to execute these laws we feel that the traffic court judge should be a full time position with a salary commensurate with the importance of his office and quarters adequate to the dignity of this office.

When, and if, these laws are passed I predict that there will be an immediate drop, and a marked one, in the number of killed and injured on our highways. The doctors have many other problems concerned with the dangers of operating an automobile but those problems are not pertinent to this point.

In closing, I would like to take the liberty of quoting our Superintendent of State Police, Col. Woodson, who recently said: "With modern traffic what it is, pleasure driving has ceased to be. Survival on the highway today calls for a mechanically perfect vehicle and a driver who is mentally alert, in good physical condition and aware of the dangerous task he is performing." And, I would like to add the car should have proven and built-in safety features in case a crash should occur.

The physician is proud of his definitive care of the injured but does not feel that his duty as a citizen and physician has been fully discharged until the known preventive measures have been adopted and are reflected in the daily gruesome statistics. So, both as a physician and now as a member of the VALC Sub-Committee I urge you to pass these two measures so vital to our health and happiness.

FLETCHER D. WOODWARD, M.D.

400 Locust Avenue
Charlottesville, Virginia

Both proposed Laws were killed in the Legislative Committee and never lived to reach the Floor of the House.

Surgeons and Surgical Care of the Confederate States Army

RICHARD BOIES STARK, M.D., F.A.C.S.
New York, New York

This tale of the Medical Corps of the Confederate Army is an epic story. It details the fierce handicap of physical paucity that finally spelled surrender, paucity of manpower, factories. Yet in spite of these harsh privations, the spirit of those involved kept the drama alive far longer than the physical realities would permit; indeed, upon several occasions victory eluded these valiant people by only a moment.

ON APRIL 2, 1865, a courier handed President Jefferson Davis a note as the President of the Confederate States of America was attending services at St. Paul's Church in Richmond, Virginia. President Davis flushed portentously, rose to his feet, and left the church. Petersburg had fallen; the year-long siege of Richmond had been lost. Soon the exodus from Richmond began, and with it, the southern end of the city was purposefully ignited. Tobacco warehouses below the State House burned, as did two important houses, which, with their contents, were completely destroyed. One building was the office of Surgeon-General Samuel P. Moore, and the other was the house adjacent, in which were stored records and reports of the Medical Corps that had been accumulating during the four years of the War Between the States. Following the loss of this invaluable material, the preparation of an adequate history of the Medical Corps of the Confederate States Army or a compilation of a roster of its personnel has never been achieved.

Although little is known of the small though extremely inventive and effective Corps of Confederate Military Surgeons, the enormity of their task has been chronicled in unit strength reports. In retrospect, its gargantuan achievement can occasion only incredulity and disbelief.

SIZE OF THE CONFEDERATE STATES ARMY AND THE NUMBERS OF ITS CASUALTIES

Confederate forces actively engaged in the four-year's War Between the States numbered no more than 600,000 troops. This small force faced a total number of 2,800,000 soldiers mustered as volunteers and through the world's first military draft into the Union Army, or approximately four times the fighting contingent of the Confederate States. Of the 600,000 Confederate troops, 54,000 were killed outright and approximately 200,000 died either from battle wounds or from disease. Another 200,000 were lost to the Confederate States Army as prisoners of war because of the policy of non-exchange of prisoners adopted and enforced by the United States. Another 100,000 were discharged because of disability from wounds or disease or actually deserted during the war years. Within this small and horribly decimated force, approximately 3,000,000 cases of wounds and disease were cared for by the Medical Corps of the Confederate States Army. On an average, then, each Confederate soldier was disabled by wounds and sickness about six times during the war. On April 9, 1865, as the war ended at Appomattox, General Lee could not muster 10,000 men who were fit for active warfare from his former great Army of Northern Virginia; Dick Ewell surrendered at Sailor's Creek with only 8,000 men to Phil Sheridan.

THE MEDICAL DEPARTMENT, C.S.A.

When the Confederacy was born, its capital was Montgomery, Alabama. The first Surgeon-General was Dr. D. C. DeLeon, a member of one of Mobile,

STARK, RICHARD BOIES, M.D., *Attending surgeon in charge of Plastic Surgery, St. Luke's Hospital, New York; Assistant Professor of Clinical Surgery, College of Physicians and Surgeons, Columbia University.*

Presented as the Walter Reed Lecture before the Section on the History of Medicine of the Richmond Academy of Medicine, February 9, 1960.

Alabama's most distinguished families. Shortly thereafter, when the Capital was moved to Richmond, the post of Surgeon-General went to Samuel Preston Moore (November 7, 1861). Prior to this, Moore had served in the Medical Corps of the United States Army for twenty-six years. As a nucleus for his Medical Corps, Moore could draw upon the experience of but twenty-four military surgeons, who resigned their commissions in the Union Army to join the Confederacy, and of two civilian surgeons (Dr. St. George Peachy and Dr. E. J. Eldridge) who had served in the Crimean War (1854-6).

The Medical Corps was organized to mirror that of the United States Army with three ranks: The Surgeon-General had the rank, pay, and privileges of a Brigadier General; Surgeons were equivalent to Majors of Cavalry; while Assistant Surgeons were ranked with Captains of Cavalry. In addition, provision was made for Contract Surgeons, who were considered to be Acting Assistant Surgeons, with the pay and privileges of a Second Lieutenant.

Born in Charleston, South Carolina, August, 1813, Moore was the son of Stephen West and Eleanor Scriven Gilbert Moore and the descendant of Dr. Mordicai Moore, Surgeon to Lord Baltimore. At 21, Moore grdauated from Medical School in Charleston and, the same year, was commissioned Captain in the Medical Corps, U.S.A. In 1845, Moore married Mary Augusta Brown, daughter of Major Jacob Brown for whom Fort Brown in Brownsville, Texas, was named. In a military career that spanned twenty-six years, Moore had served at Fort Leavenworth, Kansas; Fort Des Moines, Iowa; Fort Gibson, Missouri; Fort Coffee, Kansas; Jefferson Barracks, St. Louis; Fort Brown, Texas; Governor's Island, New York; West Point and New Orleans. He had been in general practice in Little Rock for approximately one year before joining the Confederate Army.

Much credit for the efficiency of the Medical Corps of the Confederate States Army belongs to the administrative ability of Moore.

Samuel Preston Moore was a strict disciplinarian, however, for he had been schooled for over two decades upon army regulations, and there were many complaints from the civilian physicians who felt that his enforcement of rules was little short of tyranny. Of his job, Moore said, "the duties were arduous and exacting, the routine was killing, the emergencies to be met were legion, the responsibilities were overwhelming, all decidedly too much for one man."

Moore returned to civilian life in Richmond after the war, with his financial position intact. He did not practice medicine, but remained a civic leader. For twelve years he served as a member of the Richmond School Board, where he introduced such innovations as tests for eysight, mechanical drawing, and vocal training, which he believed afforded healthful pulmonary ventilation. Suffering from trigeminal neuralgia, Moore always carried with him a vial of chloroform with which to allay the pain. He died suddenly May 31, 1889, from pulmonary edema, occasioned by a paroxysm of coughing.

The Medical Corps of the Confederate States Army was made up entirely of general practitioners who had served in all parts of the South during their professional lives in the preceding period of unbroken peace, and this left them unprepared for the vast amount of traumatic surgery which they were to treat. This was so in spite of the fact that in the antebellum years approximately half of the students enrolled in the Philadelphia medical colleges (University of Pennsylvania and Jefferson) were from Southern States (Stout).

Although an active roster of the medical corps is not available, regulations required each separate command engaged in the field to have one surgeon and two assistant surgeons, so if one added units not in the field to those actively engaged in combat, it is estimated that there were approximately 2,000 surgeons and 4,000 assistant surgeons, or a total of 6,000 which comprised the Medical Corps of the Confederate States Army. This was in contradistinction to the Medical Corps of the Union Army, composed of nearly twice as many doctors, of whom approximately 2200 were surgeons and 9500 assistant surgeons.

In addition to the more than 3,000,000 cases of wounds and disease cared for by the Medical Corps in the Confederate States during the war, 270,000 Union soldiers were held in the South as prisoners of war and whose medical needs had to be cared for. The efficiency of the department is shown in part by the fact that the percentage of deaths of Union prisoners incarcerated in Confederate prisons was approximately 8%, while the percentage of deaths of Confederate prisoners in Northern prisons was approximately 12%.

LACK OF DRUGS, SURGICAL SUPPLIES, AND TEXTBOOKS

While the Medical Corps of the Confederate States Army was sorely handicapped from the point of view of manpower, it was faced also with the complete

lack of drugs and pharmaceutical and chemical equipment, surgical instruments and supplies, and, worst of all, of textbooks upon the enigmatic medical problems that lay ahead. In antebellum years, drugs, instruments, and texts were all supplied by northern cities.

The desperate shortage of medical supplies and instruments which resulted from the Union blockade necessitated heroic improvisations. "To supply medicines which were declared by the enemy to be contraband of war, our Medical Department had to seek in the forests for substitutes and to add surgical instruments and appliances to the small stock at hand as best they could." (Moore) When Fort Sumter was fired upon April 12, 1861, the entire male student body of the University of South Carolina joined the Confederate States Army, while the faculty became the pharmaceutical house for the Medical Corps. The principal text in pharmacology was a war-time book prepared by Dr. Francis Peyre Porcher, Professor of Materia Medica and Therapeutics, at the Medical Colleeg in Charleston. This textbook of over 700 pages was entitled "Resources of the Southern Fields and Forests, Medical, Economical, and Agricultural, Being Also a Medical Botany of the Southern States, with Practical Information on the Useful Properties of the Trees, Plants and Shrubs." Porcher revised this volume in 1869.

For digitalis, bloodroot, wild cherry, bugle weed, and jessamine were used; for calomel, dandelion, butterfly weed, and pleurisy root; for belladonna, Jamestown weed; for laudanum, hops and motherwort; for diuresis, blackberry, dogwood, gentian, and pipsissewa; for malaria, leaves and bark from black and button willow; and for diarrhea, knotgrass. For opium or morphine, poppies were cultivated in the fields of Florida and North Carolina. Whiskey was plentiful during the war, thanks to the traditional diligence of Tennessee and Kentucky moonshiners.

Francis Peyre Porcher was born of Huguenot ancestry in St. John's, Berkeley County, South Carolina. His great grandfather upon his maternal side was Thomas Walker, famous English botanist. Graduating from the Medical College of South Carolina in 1847, Porcher's thesis was entitled, "A Medico-Botanical Catalogue of the Plants and Ferns of St. John's Berkeley". He spent several years studying in Paris and Italy. In 1849, Porcher published "A Sketch of the Medical Botany of South Carolina", and in 1854, he read a paper before the A.M.A. entitled, "The Medicinal, Poisonous, and Dietetic Properties of the Cryptogamic Plants of the United States".

During the war, Porcher served with the Holcombe Legion in the Naval Hospital in Norfolk, and in the South Carolina Hospital at Petersburg.

Following the war, Porcher led an active life and many honors and distinctions were bestowed upon him. In 1872 he was elected President of the South Carolina Medical Association, Vice President of the A.M.A. in 1879, and Associate Fellow of the College of Physicians, Philadelphia. In 1890 Porcher was named to a committee of ten American physicians to attend the tenth International Medical Congress in Berlin and the ensuing year to attend the eleventh such meeting in Rome. He headed the medical section for the Pan-American Congress in 1892.

A prolific writer, Porcher was editor of the Charleston Medical Journal and Review for eight years. He wrote extensively about diseases of the heart, upon which subject his writings were considered authoratative.

Porcher died in 1895 at the age of seventy.

Several factories were established by Moore, one in his native city of Charleston, for the manufacture of drugs which he manned with disabled soldiers. Moore had a continuing struggle, however, to hold his trained men so as not to have them sent back to combat.

The number of skilled instrument makers in the Southern States was small. There were, however, purchasing agents in London and in Nassau whose duty it was to purchase and to smuggle supplies into the South, usually across the Rio Grande River, supplies which were otherwise unobtainable. Many instruments were purchased from the surgical supply house of John Weiss and Son, Oxford Street, London, a firm yet in business, and from other surgical supply houses in Ireland. In addition, raids upon the relatively unguarded Northern supply lines were frequent during the early part of the war at a time when the cavalry of the South was superior. One such raid netted the cavalry of Nathan Bedford Forrest a cache of medical supplies estimated to be worth $150,000. In addition, the smuggling of quinine and morphine by Southern ladies was common, these drugs being secreted among their many petticoats as they crossed the lines.

Textbooks were scarce, and scientific exchange with foreign countries came to a virtual halt. To fill this void, two excellent manuals of military surgery were published; the first by Dr. J. Julian

Chisolm was published in 1862 and contained an appendix of regulations of the Medical Department of the Confederate States Army. In this manual, Chisolm unqualifiedly endorsed chloroform as an anesthetic agent.

John Julian Chisolm, a native of Charleston, South Carolina (1830), was the son of Robert Trail and Harriet Emily Chisolm whose antecedents came to South Carolina from Scotland. An ophthalmologist and surgeon, Chisolm had graduated from the Medical College of South Carolina at the age of 20, then had spent two years studying in London and Paris. Chisolm was the innovator in Charleston of the European custom of delivering summary lectures at night upon the previous week's work at the medical college. This plan underwent a gradual metamorphosis to become, in 1853, the first summer school of medicine. During this period, Chisolm conducted a free hospital for slaves. In 1858, at the age of 28, Chisolm was appointed Professor of Surgery. He was the youngest recipient of such a signal honor in the United States. The following year, while in Italy during the Italian-Austrian war for Italian independence, Chisolm saw the wounded from Magenta and Solferino being treated in the hospitals of Milan.

As soon as South Carolina seceded, Chisolm became the first commissioned officer of the Medical Corps of the Confederacy, and he began at once to prepare his *Manual of Military Surgery* which was to be published in 1862.

At first Chief Surgeon of a military hospital in Richmond, Chisolm returned to Charleston to direct the pharmaceutical plant there which functioned until near the end of the war, when it was burned by the forces of Sherman.

After the war, Chisolm spent a year abroad, then moved to Baltimore to become Professor of Eye and Ear Surgery and later, Dean of the Medical College of the University of Maryland.

Chisolm was a prolific writer (over one hundred medical papers), an able administrator (founder of the Baltimore Eye and Ear Institute and of the Presbyterian Eye and Ear Charity Hospital), and an outstanding surgeon (amongst the first to use chloroform as a general anesthetic agent and to use cocaine in eye surgery and an originator of an operation for cataract). Chisolm died in 1903 in Petersburg and was buried in Greenmount Cemetery, Baltimore.

The second textbook entitled "A Manual of Military Surgery Prepared for Use of the Confederate States Army", published in 1863, was largely the work of Dr. Henry Fraser Campbell, one-time president of the Medical Association of Georgia. This manual contains exhaustive data upon ligature of principle arteries for the control of hemorrhage, upon shock and collapse, and upon hospital gangrene and pyaemia.

Beginning in 1864, the "Confederate States Medical and Surgical Journal" edited by James Brown McCaw, was issued monthly for fourteen consecutive numbers. This reached the hospitals and occasionally got into the field. In this excellent journal original articles were printed along with abstracts of recent European and northern articles. Thus some innovations by the Union Surgeons became useful to the Confederate Medical Corps.

James Brown McCaw was a native of Richmond (1823) of Scotch ancestry and a descendant of a long line of physicians. McCaw studied medicine under Valentine Mott at the University of the City of New York, then returned to Richmond. A natural leader, McCaw was instrumental in founding The Medical Society of Virginia and was a member and later President of the Richmond Academy of Medicine. For two years, McCaw was editor of the "Virginia Medical and Surgical Journal" and when the publication became the "Virginia Medical Journal", he served an additional three years as co-editor. In 1858, McCaw was appointed Professor of Chemistry at the Medical College of Virginia, which was to be the only medical faculty in the Confederacy to continue to teach throughout the War Between the States.

After the war, McCaw returned to the Medical College of Virginia as Professor of Chemistry and in 1868 became Professor of the Practice of Medicine. Later he became Dean in which capacity he served for twelve years, and, yet later, he was elected President of the Board of Visitors. In 1871 McCaw became an editor of the "Virginia Clinical Record". McCaw married Delia Patterson; they had nine children, three of whom became physicians. A lover of music, McCaw was president of the Mozart Society of Richmond for many years. McCaw died in 1906 in Richmond.

DUTIES OF THE MILITARY SURGEON

In Camp. The duties of the surgeon included care of the sick in camp. In contrast to the statistics of killed and wounded is the shockingly high figure of losses due to illness in the field.

Disease. The troops of the Confederate States Army were drawn from rural districts and had never been

exposed previously to contagious illnesses; thus, exposure from crowding made contagion a frightful scourge of the army. Measles, a disease regarded lightly under ordinary conditions, struck terror in the Civil War camps, for its sequelae were pneumonia and phthisis. Eruptive diseases, glandular affections, tuberculosis, capillary bronchitis, diarrhea, typhoid and malarial fevers, and dysentery were the chief causes of mortality and dissipation of strength in the Confederate Army. The War Between the States antedated the classic work of Ronald Ross upon malaria (1898) and of Walter Reed upon typhoid in the same year; hence the two illy-understood diseases, typhoid and malaria, were united under the common appellation "typho-malarial fever". Aiding and abetting interpersonal exposure were fatigue, deficient food which was often spoiled, clothing which was often ragged or lacking, no water purification, poor shelter, exposure to sudden changes of temperature and to dampness and wetting, as well as indifference to or ignorance of field sanitation.

Sanitation. Unhappily, many regimental camps were accumulations of filth that were beyond description, the odor of which could be detected from great distances. A strong appeal was made to the men to use unit latrines and not to use the campsite in random fashion. It was suggested that latrines be placed at least 100 yards from the tents and on the down-wind side. Privies were established over water, and, since this was before the advent of bacteriology, pollution of the water supply went unrecognized and was partially responsible for the dreadful morbidity and mortality from diarrheic and dysenteric diseases. Regulations dictated that latrines were to be prepared immediately upon the establishment of camp, and the men were compelled to use them under penalty. Penalties were rarely imposed, however, and the inconvenience of travelling to a distant latrine was exchanged too often for the convenience of using the camp site.

On the March. The duties of the surgeon upon the march included the establishment of field hospitals. As soon as it was learned from the commanding officer where the troops were to engage in combat, a site for a field hospital was chosen, preferably behind a hill or in a ravine for defilade, approximately one-half to one mile in the rear of the line of battle. The assistant surgeons were placed between the regiment and the field hospital, administering first aid to the wounded at the dressing station which was the forerunner of the Battalion Aid Station. Here, assistant surgeons adjusted and temporarily cared for fractured limbs, controlled hemorrhage, gave drugs to relieve pain, and made certain that the wounded were carried promptly to the hospital by the infirmary detail or ambulance corps. The wounded were brought from the front on stretchers or in ambulances by members of the regimental band which comprised the infirmary detail whose modern counterparts are the Company Aid Men. The senior surgeons of the brigade or division performed necessary operations in the field hospital.

The Journal of Lt. Col. James A. L. Fremantle, observer from the Coldstream Guards, merits a direct quote in this regard. In an entry that preceded the Battle of Gettysburg, he wrote, "I saw, for the first time, the celebrated 'Stonewall' Brigade, formerly commanded by Jackson. In appearance the men differ little from other Confederate soldiers, except perhaps, that the brigade contains more elderly men and fewer boys. All (except, I think, one regiment) are Virginians. At 3 P.M., we began to meet wounded men coming to the rear, and the number of these soon increased most rapidly, some hobbling alone, others on stretchers carried by the Ambulance Corps, and others in the ambulance wagons. Many of the latter were stripped nearly naked, and displayed very bad wounds. This spectacle, so revolting to a person unaccustomed to such sights, produced no impression whatever upon the advancing troops, who certainly go under fire with the most perfect nonchalance. They show no enthusiasm or excitement, but the most complete indifference. This is the effect of two years of almost uninterrupted fighting."

Anesthesia.

Nitrous oxide, ether, and chloroform had been discovered and used extensively prior to the War Between the States. Although the least used of the three, Humphrey Davy (1798) had demonstrated the efficacy of nitrous oxide in relieving pain. Crawford Long used ether (1842) but was loathe to publish his results. In 1846, William T. G. Morton, a former dentist who at his appointed moment in history was a medical student, gave ether to Gilbert Abbott while Dr. John Collins Warren removed a vascular tumor of the neck. At the conclusion of the operation, Warren's comment, "Gentlemen, this is no humbug" established firmly this state of unconsciousness that permitted painless surgery, to which Oliver Wendell Holmes later gave the neologism, anesthesia. In Scotland, the great obstetrician, James Young Simpson, had used ether in obstetrics but

was distressed by the frequent occurrence of pulmonary complications. He experimented with other volatile liquids and found that chloroform was a more powerful agent than ether. Simpson used the agent fifty times in eleven days and published his results after one month's trial. The bitter medical and moral controversy that ensued over the use of an "unnatural" agent in childbirth was quelled when Queen Victoria permitted it to be used when she gave birth to Prince Leopold.

Chloroform had been used 25,000 times previously in the Crimean War with no unfavorable results, and was the anesthetic agent of choice in the War Between the States. Dr. Hunter McGuire, Medical Director of Jackson's Corps, collected 15,000 cases of chloroform anesthesia during the war without a single death.

Preoperatively, the patient was given a light nutritious meal in the hope that the stomach would then be empty and the patient strong. Brandy was the premedication of choice. The patient was placed in the supine position, and chloroform was poured upon a cloth cone. The anesthetist and the assistant were completely silent during the induction. Corneal reflexes were tested to determine complete anesthesia of the patient. The pulse, respiration, and color of the patient were scrutinized closely. If the airway became obstructed, the tongue was seized (by a hook, tenaculum, forceps, or fingers) and was brought forward. Although the blockade of the Southern states was most effective, chloroform, quinine, and morphine were never lacking completely in the Confederacy during the war.

Hunter Holmes McGuire was born October 11, 1835, in Winchester, Virginia, a town that was destined to be not alone his place of birth but also the key city in the campaign for possession of the Shenandoah Valley. The city changed hands approximately eighty times during the war.

McGuire's grandfather, Captain Edward McGuire, had been a well-known figure in the Continental Army and a large land owner; McGuire's father was Dr. Hugh Holmes McGuire, founder of the Winchester Medical College, the first medical college in the State of Virginia, from which, in 1855, Hunter McGuire received what was to be his first of two M.D. degrees. To secure wider training, Hunter McGuire had gone to Philadelphia where he attended courses at Jefferson Medical College and the University of Pennsylvania. Soon he joined Dr. Luckett and Dr. Pancoast as teachers of a highly successful quiz course. McGuire was a superb teacher, and the numerous southern students in Philadelphia accepted him as their spokesman.

At this time, John Brown, who had murdered five dirt farmers in the Kansas-Nebraska Territory in the cause of abolition of slavery, had attempted a military coup at Harper's Ferry. There he had hoped to establish a republic composed of Negro slaves who had been freed and by whose example he hoped to speed the abolition of slavery. But this was treason, and to apprehend the traitor, the United States Marines under Robert E. Lee were sent to Harper's Ferry. Brown was duly captured and hanged, but as his body was shipped north, abolitionists demonstrated along the route in an attempt to deify the man. Demonstrations in Brown's behalf were extravagant, but in Philadelphia, numerous altercations occurred, usually between Northerner sympathizers and the Southern medical students. The inimical feeling that resulted against the medical students made many of them desire to transfer to a Southern school of medicine where they could pursue their studies in a more friendly climate. Hunter McGuire, their leader, was successful in transferring all of the students to the Medical College of Virginia, without loss of credits; and Hunter McGuire paid from his own pocket the train fare of the group. Once in Richmond, McGuire enrolled in the Medical College of Virginia and, in due course, obtained his second degree as Doctor of Medicine.

When war broke out, McGuire volunteered in the Second Virginia Regiment and was assigned to the command of Colonel Thomas J. Jackson at Harper's Ferry, and later to "Stonewall" Jackson's Army of the Valley of Virginia. Early in the war, McGuire, who considered military surgeons to be non-combatants, persuaded Jackson to release seven Union surgeons who had been captured in Winchester, under the agreement that these surgeons would do their best to influence the United States Government to release Confederate medical officers as well. For a time the exchange of medical officers worked well, and, hence, was born one of the basic tenets of the Red Cross, which was to be founded later and which adopted McGuire's concept. And Hunter McGuire's practice of liberating medical prisoners worked to his advantage, for, when he was captured at Waynesboro by Sheridan's men, Sheridan, learning McGuire's identity and knowing that McGuire had released Union medical officers, some of whom were from his command, ordered McGuire's immediate release.

At Chancellorsville, when Jackson was wounded

seriously in the left upper extremity during the achievement of his greatest victory, it was McGuire's sad duty to surgically complete the incomplete amputation of Jackson's arm. General Jackson did well for his first five postoperative days, while he convalesced at the Chandler House, Guinea's Station. His wound sealed primarily except over the bone, where healthy granulations appeared. Then Jackson developed right sided pneumonitis, attributed variously to his fall from the litter which possibly occasioned rib fractures or to a pulmonary embolus, and this proved to be fatal upon Jackson's eighth postoperative day.

Following the war, McGuire returned to Richmond to become Professor of Surgery at the Medical College of Virginia. Succeeding Dr. Charles Bell Gibson who had died, McGuire held this position until 1878, then became Professor Emeritus. In 1883 McGuire organized the St. Luke's Home for the Sick with a nurses training school. When the St. Luke's "Home" was rebuilt in 1899, it became St. Luke's Hospital. Foreseeing the need for an extended and revised medical curriculum to exploit the innovations of Lister, Pasteur, Koch, and Roentgen, Hunter McGuire founded the first three year medical school in the South, the University College of Medicine, of which he was president up to the time of his death, September 19, 1900. The University College of Medicine existed for twenty years, then consolidated with Memorial Hospital and the Medical College of Virginia under the name of the latter.

Hunter Holmes McGuire was muchly honored during his lifetime, being elected president of many medical organizations: Medical Society of Virginia, Southern Surgical Association, Association of Medical Officers of the Army and Navy of the Confederate States, American Medical Association, and the American Surgical Association. McGuire was granted honorary degrees from the University of North Carolina and from Jefferson Medical College in Philadelphia.

Antisepsis.

Antisepsis and asepsis were not understood at the time of the War Between the States, as the discoveries of Lister came, ironically, in 1867, as the war ended. Although instruments were always unsterile, Southern surgeons cleansed their wounds with rags that had been washed clean, boiled, and ironed. This was in contradistinction to the care of wounds by Union surgeons, who washed all wounds with an unclean sea sponge used indiscriminately in all cases. Robert Weir, distinguished northern surgeon described this part of the operation, "Fine, beautiful and soft looking (sponges) they were taken from the pail . . . and placed in a basin for the nurse to hand to the surgeon . . . during the operation. Sometimes the surgeon and the assistants washed their hands previously—(the limb was washed, if an amputation were to be done), and for this . . . the nice-looking sponge (was used), filled with disease germs from previous operations which had been multiplying while resting in their pail full of water. Fingers laden with germs in large quantities on them or under the nails, were stuck into the wounds and often fatal germs (were introduced) by the brilliant and apparently clean instruments. . . ."

Blood vessels that were transected were ligated or tied and for this the Northern surgeons used unsterile silk, the ends of which were left long and led out the wound. When ligatures became loose, because of autolysis of tissues, they were pulled out, often with accompanying hemorrhage. The unsterile ligatures served as a capillary wick which allowed additional bacteria to enter the depths of the wound. Sutures, too, were unsterile. Weir stated, "in 700 amputations that I had in the military hospital under my charge (1861-5), in only one case did I have what was called primary union of the stump, that is to say, a stump entirely free from infection of a mild or severe form."

Because the South had no silk for ligatures and sutures, horse hair was used, and to make it more pliant, the horsehair was boiled; hence, by happy accident, the material buried in the wounds was rendered sterile.

Infections.

Weir stated that in the Northern hospitals, erysipelas was always rife, as was the fearful disease called hospital gangrene (phagedaena gangrenosa) . . (manifested by) a thick grayish mould over the wounds with an intense burning pain accompanied by high fever and rapid loss of strength.

"(There was) yet another, more serious and terrible (complication) . . . pyaemia or blood poisoning, (with which we were unable to cope). To go into a ward, for instance, and inquire "How is Jones, with his week-old compound fracture, doing today", to have the nurse say he had a chill this morning. To look at his wounded leg did not help the diagnosis. There was nothing of the irregular blush of erysipelas or of the gray coating of hospital gangrene to be seen. Later in the day, or on the

morrow, the report would be: Jones had another chill last night and another this morning. . . . Then we knew that was coming. The poor fellow's wound had become infected, which infection . . . had passed into his system and was setting up abcesses in his lungs, liver and other organs. The issue in most cases was fatal."

In Southern hospitals, erysipelas and gangrene were treated by incision and drainage of abscess collection if present. The wound was washed three times daily with Laboroque's Solution, or chlorinated water which was not dissimilar to Dakin's Solution. Hospital gangrene and pyaemia were treated supportively as well, with confinement of the patient to clean quarters, good food, and fresh air.

The etiology and pathogenesis of tetanus was understood not at all and patients who contracted the disease were foredoomed to die. The 1863 *Manual of Military Surgery for the Army of the Confederate States* stated, "To enumerate the means used for the relief of tetanus would require a volume; to record those entitled to confidence does not require a line."

Wounds.

A large portion of the injuries of battle were brutal wounds caused by the Minie ball, a conical rifle bullet named for its inventor, Captain C. E. Minie of France. The low velocity of the Minie ball accounted for its destructive qualities, which produced most horrible wounds. With low velocity, the conical ball would turn in its course, causing a bursting type of wound of exit. Enfield bullets, too, produced such wounds. These wounds were much more severe than those caused by bullets of higher velocity such as used by the sharpshooters, which passed completely through the soft parts and bones without turning broadside. Wounds from cannon were rare, and in a cavalry charge sabre wounds would account occasionally for a small percentage of wounded patients: for example, two hundred and fifty cannons were used in the Battle of the Wilderness, and only twelve men were injured by their action while six received wounds from bayonets.

Extraction of the bullet foreign body was felt to be essential in the care of the wound, if not attended by "positive hazard", and an elaborate series of bullet probes and extractors was devised. It was taught in military medical manuals, however, that "the finger is the best probe" and often the searching digit was the cause of the unfortunate patient's demise. Once the ball was removed, steps had to be taken to arrest hemorrhage, which was a major technical problem but was partially understood at the time of the War Between the States.

Hemorrhage.

"Three-fourths of those who died in battle perish from hemorrhage." It was stated, "No class of operations demands an accurate knowledge of anatomy than those upon the arteries: no class in which perfect equanimity is so important to the surgeon, and no class, the attendance of which is more calculated to alarm, disconcert and confuse.

Hemorrhage itself was divided into primary and secondary hemorrhage. The latter was subdivided into several types. "Retarded hemorrhage" occurred eight to ten hours following injury. It was stated that following the engagements around Richmond during the Peninsular campaign, a large number of the wounds began to bleed freely after the patient arrived at the hospital. These were often produced by the ambulance ride to the rear. "Intermediate Hemorrhage", due often to change of dressing or to the trauma of movement and nursing, occurred three to five days following injury without any antecedent hemorrhage. "Consecutive hemorrhage" occurred eight to fifteen days following surgery when the separation of slough opened a vessel injured previously.

An example of "consecutive hemorrhage" is given by a wound dresser: "Under a grand old oak, whose spreading branches gave shelter to nearly fifty men, was ------, whose case for many days I had watched with the strongest interest, his wound seemed not dangerous, only painful; it was in the arm, under the shoulder. He was always cheerful; and in his place, next the door, I knew where to look for a kindly greeting whenever I entered the room where he lay. He had been sadly weakened by hemorrhage, but was hopful that within ten days he should be home under his mother's care, and he wanted me to write to her. Taking pen and paper, at his dictation I wrote a most comforting letter to his home; it was full of hopes and plans. He felt as sure of life as any of us who ministered to him, while he was in reality at the brink of an open grave. I left him for an hour, hardly out of sight, and still at work among his companions, when, turning, I noticed an extreme pallor upon his face. He had just realized that a hemorrhage, which was then beginning, would soon place him beyond all human aid. An artery had been eaten away in process of healing, and he was bleeding to death."

The treatment of hemorrhage was divided into provisional and operative means. Provisional, or conservative, means consisted of pressure, elevation, and application of sedation, cold, and local styptics. Pressure was exerted either by hand or by the application of a tourniquet over the course of the main artery proximal to the injury, with the object of flattening the vessel and of obliterating its lumen. Styptics of persulphate and perchloride of iron (Monsel's Solution) were used.

Severe hemorrhage was treated by ligation of both ends of the severed bleeding vessel. Enlargement of the wound was accomplished parallel to the long axis of the vessel.

Wounds of the Extremities.

Of those wounded soldiers who lived to reach a hospital, 70% had wounds of the extremities. From experience gained in the Crimean War, it was well known to all Confederate surgeons that a gunshot into any joint or a gunshot fracture of the femur would nearly always be fatal if not operated upon. Statistics available from the Crimean campaign revealed that 90% of patients with compound fractures of the femur would die if the limb were not amputated; with amputation, this figure was lowered to 69% in the Crimea. Consequently, early in the War Between the States, the rule was established that, if an extremity were injured seriously, it should be amputated. In 1864, it was reported in the Confederate States Medical and Surgical Journal that the over all mortality in a large series of cases in which amputation, resection, or disarticulation had been performed was 34%. Delayed or secondary operation carried with it a mortality that was approximately double that of primary operations. Thus for operative procedures of the types mentioned, the primary versus the secondary mortality, for the femur was 38% versus 73%; for the leg was 30% as opposed to 49%; for the upper arm was 14% versus 37%; and for the forearm was 12% against 22%.

The account of an amputation performed by the great English surgeon, Robert Liston, permits one to appreciate the dexterity of a master surgeon of that day. "In twenty-eight seconds the leg had been removed through the thigh, done as only Liston could do it, singlehanded, using his right hand to cut and saw and his left to grasp the thigh, pressing on the artery to stop the bleeding; an incredible performance."

By 1864, there were nearly 10,000 amputees in the Confederate States Army. Although artificial limbs were being manufactured at that time for lower extremity amputees, the manufacturer could supply only one-tenth of the demand.

An ingenious method of splinting was devised by Professor Nathan R. Smith, Professor of Surgery, University of Maryland, consisting of bandaging the limb to an anterior mold splint and suspending the extremity from an overhead frame. The splint was made of wire and was easily applied. The first patient treated by the anterior wire splint was a teamster of the Eighth Louisiana whose femur had been fractured when run over by an army wagon. Dr. Edwin D. Newton introduced the device which worked satisfactorily. Hearing of the innovation and appreciating its import in the fighting to come, Samuel Preston Moore appointed a commission of surgeons to inspect the splint and to see the patient. The commission approved of the new method unanimously, and the splint (called by Surgeon F. E. Daniel "a blessing to the Confederate surgeons, a refuge, and a tower of strength") came into being.

Surgeon James Bolton was quite vehement over the needless loss of extremities, stating that amputation was only an exchange of death by exhaustion for death by shock, but "If a limb be saved, it will almost certainly be shortened, and frequently misshapen; and this may happen to such an extent that the limb may be an incumbrance." As a result of his dilemma, in 1864 Bolton devised an ingenious form of extramedullary fixation. Through two stab wounds in the soft tissues, holes were drilled in the cortex of the long bone. Screws were placed through these holes, and a longitudinal rod was passed through the two upright screws, outside the skin and parallel to the shaft of the bone. Bolton's method was the antecedent of the present-day Roger Anderson apparatus.

A native of Savannah, James Bolton was taken to New York City while yet a child. He received his B.A. degree from Columbia University and his M.D. from the College of Physicians and Surgeons in 1836. Bolton's clinical training was received under Dr. Valentine Mott and Dr. John Kearney Rogers. Returning to the South, Bolton began practice in Richmond, where he wrote a monograph upon the treatment of strabismus. Interested in the application of anesthesia to surgery, in 1851 Bolton wrote upon the use of ether in operations for hemorrhoids. An article written in 1852 entitled, "A Test for the Safety Point in Anesthesia" was related to Bolton's use of chloroform and did much to encourage the

use of anesthesia in the face of widespread apprehension concerning the dangers associated with the use of volatile liquids. In 1858, Bolton was elected president of the Medical Society of Virginia. During the war, Bolton was in charge of the Howard's Grove Hospital in Richmond.

Wounds of Abdomen and Chest.

Approximately 20 per cent of the wounds incurred were of the torso. Abdominal wounds which perforated a hollow viscus were almost uniformly fatal. Although the pathologic physiology of sucking wounds of the chest was understood imperfectly, Assistant Surgeon Howard, of the United States Army, publishing in the New York Medical Times and abstracted in the Confederate States Medical and Surgical Journal, suggested that gunshot wounds of the chest be treated by sealing hermetically the wounds of entrance and exit, thus preventing the additional entry of air into the pleural cavity which would thereby collapse the lung and cause a mediastinal shift. Such treatment was instituted by the Confederate surgeons.

Facial Wounds.

Ten per cent of wounds of battle involved the head and neck. Fractures of the mandible early were treated in the Confederate States Army by application of a pasteboard splint, devised by Medical Director S. H. Stout of Tennessee. The cardboard splint was padded with cotton and secured by a bandage with a bifid tail. Dr. Stout who was in charge of hospitals in Tennessee, utilized the services of Dr. J. B. Bean, a Chattanooga contract dentist, who advocated the splinting of fractured jaws by intermaxillary wiring as well as by use of a vulcanite splint. Dr. Bean had suffered from "chronic rheumatism", and hence was not upon active duty. Both, Dr. Stout and Dr. Westmoreland, professor of surgery at the Medical College in Atlanta, availed themselves of Dr. Bean's skill in the treatment of gunshot fractures of the jaws. Although it was never possible for Dr. Stout to place a dentist in every hospital in his command, nevertheless a number of civilian contract dentists were employed, as Dr. Bean had been, and funds were made available for them to work upon the problem of jaw fractures. Dr. Stout gave great impetus to the military aspects of dental surgery. Stout stated, "The result of Dr. Westmoreland's and Dr. Bean's joint labors was so satisfactory, so perfect in its adaptation to the treatment of gunshot fractures of the lower jaw, that it had never before been equalled in the securing of comfortable articulation of the subject of the fracture while under treatment. . . . While inspecting the hospital, Dr. Westmoreland introduced me into what he called his 'broken jaw ward', where I was greeted with great hilarity by the patients, who were able to converse freely and distinctly with me." Writing of Bean's achievement, Bolton stated, "The interdental splint appears to me to approximate perfection as nearly as we are likely to reach." Approximately 40 cases were published in whom intermaxillary wiring was carried out.

Several plastic surgical reconstructions were carried out by Surgeons Charles Bell Gibson, who reconstructed the chin of one soldier, who had sustained its loss due to a shell wound, and the lip of another who had had a carcinoma which required resection.

Hospitals.

Richmond became a vast collection of hospitals during the war just as did Washington and Alexandria in the North. There were twenty-seven numbered hospitals in Richmond, and over fifteen named hospitals. Many of the casualties were nursed in private homes by the ladies of the Confederacy. Not only were the wounds of the Confederate soldiers cared for, but their wants in clothing and food were satisfied as well. "A soldier taken into a private home often went forth after his convalescence wearing a beautifully patched uniform and underwear made from the linen of the women who sacrificed their own clothes and comfort for the benefit of the men at the front."

The best known lady of the Medical Corps of the Confederacy was its only female officer, Sally Louise Tompkins, who expended most of her ample resources establishing and maintaining a hospital in the home of Judge John Robertson upon the northwest corner of Third and Main Streets. Sally Tompkins took her mother's cook and was loaned another by Dr. Spotswood Wellford. Properly named the Robertson Hospital, this installation hospital was operated with a high degree of efficiency and established an enviable record, admitting 1333 patients of whom only 73 died (a mortality of 5%). In 1862, an executive order was issued which placed all private hospitals under Government control. Because it was feared that such an order would cause the Robertson Hospital to lose its benefactor, President Davis commissioned Miss Sally L. Tompkins a captain in the Confederate States Army. Sally Tompkins accepted

this commission but refused to place herself upon the payroll of the Confederate States. The commission given to Captain Tompkins was the only one granted to a woman by the Confederate States Army.

The largest hospital in the Confederacy and its most famous was Chimborazo Hospital in Richmond upon the heights which had been named for a mountain peak in the Ecuadorian Andes. Chimborazo, with a bed capacity of 8400, was larger than the Lincoln Hospital in Washington, D.C., and was reputed to be the largest hospital ever established upon the western hemisphere. Richmond was the location too, of Winder Hospital, with 5000 beds, and of Jackson Hospital with 2500 beds. During its three years of operation, Chimaborazo treated 76,000 patients, of whom 17,000 were casualties of battle. (Lincoln Hospital had cared for 46,000 patients.) The overall mortality was approximately 9%.

Shortly after the First Manassas, General Joseph E. Johnston reported to Surgeon-General Samuel Preston Moore, who at that time had 25 available beds, that nine thousand casualties would have to be returned to Richmond for treatment before his army could regain mobility. Samuel Preston Moore sought out James Brown McCaw, still in his thirties, and who at the time was enlisted as a cavalryman, to establish and command the hospital complex that was to be called Chimborazo.

Situated upon the heights, Chimborazo Hospital commanded a lovely view and inherently possessed ideal drainage. McCaw erected his hospital as a series of one story, 100 x 30 feet pavilions, each of which accommodated up to thirty-two patients whose beds flanked a central aisle. The pavilions were built of rough planks whose exteriors were kept gleaming white by the use of lime. Fifteen or twenty such pavilions built in a given area, though separated by streets, constituted a Division. Three or more Divisions comprised a General Hospital. The size of Chimborazo can be appreciated when one realizes that in fact it was a complex of five General Hospitals, each one given over to the patients and the medical officers of a given state. In all, the hospital encompassed 150 buildings and 100 Sibley tents of the tepee type. McCaw showed his genius for administration by buying several large tobacco warehouses in near proximity to the hospital, which he utilized for the manufacture of soap. The well seasoned lumber used for tobacco boxes, obtained by this purchase, was utilized to build bedstead, furnishings, and partitions. McCaw used the factory hands for manual labor. Further construction included a large icehouse, a Russian bathhouse, a sewage disposal unit, and a bakery. Ten thousand loaves of bread were baked daily, allowing each patient one loaf per day. Water wells were dug. A brewery was established with a capacity of 400 kegs of beer to a brew. McCaw maintained herds of upwards to 200 cows and 500 goats so that fresh milk and meat were available for the patients. To procure fresh vegetables, several canal boats plied the James River Valley purchasing fresh vegetables for the patients. The total staff numbered 120, of whom 40 to 50 comprised the medical staff.

During this period of intense activity McCaw, as editor of the "Confederate States Medical and Surgical Journal", saw to it that six scientific reports appeared from the staff of his own Chimborazo Hospital.

Surgeon Alex G. Lane who was commander of the Winder Hospital with 5000 beds, ran his hospital equally well at the total cost per patient of $16. Lane conducted a weekly quiz class for his surgeons so as to maintain the highest standards possible of professional care.

In studying the medical history of this, the last of the Romantic Wars in which the individual was of importance, one is impressed by men like Moore, Porcher, Chisolm and McGuire, who were ready and prepared for their appointed role in destiny at the onset of the war. Moore knew administraton and had been honed by army discipline. Porcher's knowledge of herbs and of drugs was absolute and much of his medical botany had already been published in another form. As South Carolina seceded, Chisolm began the writing of his military manual which was based upon observation made during the war of Italian independence. McGuire, a natural leader and a member of Jackson's staff, was of immense help to his General because of his intimate knowledge of Jackson and his medical idiosyncracies. And McGuire, in the Medical Revolt, had effected the first "succession" which antedated Fort Sumter by several years. We cannot do better than to quote Hunter McGuire upon the calibre of the Southern Military Surgeon, "I can say, in truth, before the war ended, some of the best military surgeons in the world were found in the Confederate Army."

In addition to the calibre of men who were chosen to lead the Confederate States Army, one is struck by the advantage that accrued to the South because it did not have an entrenched old guard or officers corps with which to contend.

This tale of the Medical Corps of the Confederate

States Army is an epic story. We have tried to detail the fierce handicap of physical paucity that finally spelled surrender, paucity of manpower, factories, supplies; yet in spite of these harsh privations, the spirit of those involved kept the drama alive far longer than the physical realities would permit; indeed, upon several occasions victory eluded these valiant people by only a moment.

Our narrative is incomplete. The firing of Richmond destroyed details and many heroic stories. However, the basic theme of our narrative is true. We have merely recounted it; it was you and your families who enacted all of the noble parts.

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Public Health....

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The Use of Atomic Energy in Industry

The term atomic energy, to much of the public not directly associated with it, suggests little more than military weapons and atomic reactors for power production. It is true that the future holds promise of generalized use of reactors to provide power and process heat in industry. For the present, however, such applications of atomic energy are largely in the experimental and developmental stages and are not of immediate concern to medical people at large.

There are numerous other uses of atomic energy which are at a stage of development sufficient to save American industry something on the order of one billion dollars annually. Many of these are found in Virginia, and all have certain health and medical aspects which necessarily make them of interest to the readers of this publication. This paper is written as a brief outline of a few of the more important current uses of atomic energy in Virginia industry.

INDUSTRIAL RADIOGRAPHY

Industrial radiography is not, of course, a new subject. For many years, x-ray machines and radium gamma sources have been used for the non-destructive testing and inspection of things like welds, castings, packaged foods, and other products. These methods, however, have always had certain inherent disadvantages.

An x-ray machine of sufficient power to penetrate steel welds and large castings is necessarily bulky and difficult to transport. In many cases, such as in the hold of a ship under construction or repair, it cannot possibly be used because of its bulk. The alternative has been to use an encapsulated radium source in confined quarters.

Radium is not only extremely expensive, but one of the most dangerous of radioactive materials. It emits alpha, beta, and gamma radiations, has an extremely long effective life, and, if ingested or inhaled, remains in the bones of the body throughout the life of the individual. Since one of its decomposition products is radon, a gas, it tends to break out of its encapsulation with consequent danger to the environment. If the object to be radiographed is especially dense or thick, much valuable time may be lost because of the limited gamma energy of radium.

The Atomic Age has produced a whole series of radioisotopes which may be used for industrial radiography. Most of these are housed in safe shields which can be easily transported to the job site. When on site, the source can be cranked out of the shield by remote means to make the radiograph, and then retracted without need for a significant personal exposure. The isotope used and the quantity involved can be tailored to the job. For example, a large Cobalt^{60} source, having a very energetic gamma, would be used to radiograph a large steel casting; an Iridium^{192} source, having a gamma of lesser energy, would be used to radiograph a moderate sized pipe weld. Other isotopes of very low gamma energy can be used to radiograph light metal objects such as aluminum and magnesium.

Those isotopes in common use for radiography can be securely encapsulated to prevent transfer of radioactive contamination to the environment. Medical control can be accomplished largely by means of personnel monitoring devices and hand-held survey instruments.

DENSITY GAUGE

Process control and quality control are costly necessities in many industries. As an example, paper is commonly made to meet or slightly exceed a specified weight to area ratio. By older methods of process control, it was necessary to measure the weight of paper after it came off the Fourdrinier machine. If it did not meet specifications, it was then necessary to re-pulp and re-make a quantity of paper. If it exceeded specifications, an important margin of profit was lost.

The modern beta density gauge has eliminated much of this waste. Beta emitting isotopes, such as Strontium^{90}, can be arranged to direct a beam of radiation through the paper sheet near the wet end of the machine. A radiation sensing device measures the amount of beta radiation passing through the sheet. Since there is a known relationship between sheet density and the radiation absorbed by the sheet, it is possible to use transducing systems to regulate the flow of pulp to the paper machine before a serious process error can develop.

In a similar way, the weight of tobacco contained in cigarettes is controlled by beta density gauges. In the Richmond-Petersburg area alone, there are many hundreds of such devices. Other applications

include control of the thickness of cellophane sheeting in process, the strength of process chemical solutions passing through pipe systems, and the thickness of coke deposits in petroleum refinery coking ovens.

Where the product to be controlled is light, such as paper or cigarettes, a beta emitting isotope is used. Where the product is pipe or tank contained, a more penetrating gamma emitter such as $Cobalt^{60}$ is used.

Beta radiations have very limited ability to penetrate solid substances. For this reason, beta sources must be very lightly contained so that a useful amount of radiation may escape. It is, therefore, always possible that some radioactive material may escape or leak from the device and endanger the environment. To combat this, users of beta gauges are required to carry on a program of leak testing of all sources. The importance of this can be deduced from the biological behavior of strontium. Not only does strontium have a long physical life, but, being a bone-seeker, remains in the human body for a long period.

Some density gauges use $Krypton^{85}$ as the beta source. Since Krypton is biologically inert, such devices are considered relatively safe from the standpoint of leakage of radioactive material.

LEVEL GAUGES

Energetic gamma emitters, such as $Cobalt^{60}$, are used to control the level of many materials stored in bins, silos, or tanks. Examples found in Virginia are control of the level of paper pulp in process storage tanks, and the level of ore in bins from ship unloading.

The principle is simple. The gamma source is mounted on one side of the tank at the level to be maintained. A sensing device is mounted on the opposite side at the same level. When the amount of radiation reaching the sensing device is reduced, obviously the desired level has been reached. Either manual controls or automatic transducing systems can then interrupt the flow of material to the tank. In this way, many costly spillages and much personnel time are saved.

Most of these sources are retractable to safe shields to facilitate safe handling and inspection.

ILLUMINATION

Once again, this is not a new subject. Radium paints have long been used to provide instrument dial illumination independent of an electric power source. The medical history of this practice, however, has been most unfortunate. There have been numerous cases of radium poisoning among dial painters, most of them fatal eventually. Furthermore, the direct radiation hazard from instrument dials can be important in some cases. An example is the cockpit of a commercial aircraft containing a large number of dials.

Some of the man-made radioisotopes can be used for illumination with far greater safety. Examples are Tritium and $Krypton^{85}$.

Tritium has a very weak beta which has the advantages of low penetration, inability to damage phosphors, and relatively low biological activity. $Krypton^{85}$ has two weak gammas, and two fairly energetic betas, but since it is biologically inert it is used with relative safety to illuminate such things as railroad yard signals, and emergency exits.

INDUSTRIAL TRACER TECHNIQUES

Industrial tracer techniques are already vast in scope, but the eventual potentialities have scarcely been scratched. Space does not permit a complete discussion, but a few examples can be cited.

In certain industries having complicated piping systems, difficulty and waste have long resulted from inability to determine the exact proper moment to open or close systems of valves. It is now possible to trace the movement of materials through pipes by injections of radioactive tracers in harmless quantities. Strategically placed sensing devices then give the signal for manual opening or closing of valves, or transducing systems may be used to accomplish this automatically.

Some chemical and biological manufacturing processes are directly controlled by radioactive tracer methods. An example is the manufacture of vitamin B_{12} which is produced by a special fermentation process and which naturally contains Cobalt. To trace the progress of the fermentation, a radioactive isotope of Cobalt is placed in process. When the measured uptake of tracer has reached a pre-determined level, the fermentation is considered complete.

If the vitamin batch is intended for general public use, a cobalt isotope with a short half-life is used. The product is then held until radioactive decay is essentially complete before shipping to the consumer. If the preparation is intended for diagnostic use in a hospital, it may be labelled with long-lived $Cobalt^{60}$.

Of particular interest to Virginia industry, is the use of radiotracer techniques in the research departments of the great tobacco companies. If it is ever proven that cigarette smoke contains provable carcinogens, this will probably result from the use of radioactive tracers in the laboratory.

Mental Health . . . .

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The Nature and Action of Tranquilizers in Psychiatry

The tranquilizing drugs are said to produce relief from anxiety or psychomotor excitement with a *minimum* of sedation and generalized central depression. Their difference in this respect from the other central nervous system depressants, such as morphine, alcohol, bromides and the barbiturates, is apparently therefore only one of degree. The actions of the latter drugs in appropriate dosage ranges can also be described as tranquilizing. "One striking feature of the group of drugs known as tranquilizers is the marked variety of their chemical structure and additional, or perhaps primary, pharmacological actions. The agents most widely used at present were introduced originally for other purposes, and their tranquilizing actions were noted incidentally during clinical trials. Thus, chlorpromazine was used first in the production of artificial hibernation, reserpine (in this country) for the treatment of hypertension, and meprobamate as a skeletal relaxant." [1]

THE PHENOTHIAZINES

The first phenothiazine used to any extent in medicine was promethazine (Phenergan), a potent, long-acting antihistamine. It was soon apparent that this agent had unusual central-nervous-system effects. It produces sedation but not true hypnosis, and laboratory studies showed it to potentiate central-nervous-system depressants and to interfere with learned-behavior performance in rats. These unusual properties led to further study and preparation of compounds of this class.

As a consequence of these researches, the first highly potent and most versatile agent of this series was chlorpromazine (Thorazine) and was introduced into the U. S. A. in 1952. Since then several more agents of this series have been released for clinical use, and there are at present still more derivatives under active investigation.

Chlorpromazine is 2-chloro-10-(3-dimenthyl-amino-propyl) phenothiazine. It is a grayish-white crystalline powder readily soluble in water and it is sensitive to light.

The exact mechanism of action of chlorpromazine is unknown. It produces depression of the central nervous system; it has weak anticholinergic, antihistaminic, antispasmodic and hypotensive action. It potentiates the action of barbiturates and narcotic analgesics. It reduces the pressor response of epinephrine and nor-epinephrine and has an action on the central nervous system similar to that of reserpine. Chlorpromazine does not have any effect on serotonin and does not exert its hypotensive action by the same mechanism as reserpine does. Animals show reduced hostility, learned-conditioned response in rats is interfered with, fighting fish do not fight, and overactive behavior in animals is reduced. It does not cause any specific changes in the electroencephalogram, and all evidence indicates that it does not have a direct effect on the cortex. Thalamocortical circuits can be depressed by the drug, and some studies indicate that it also depressed the reticular-activating system, but the occurrence of this effect has been seriously questioned by others. Chlorpromazine does not have a useful effect on either monosynaptic or polysynaptic reflexes traversing the spinal cord, although it has a good depressant effect on the nerve cell of the chemoreceptor trigger area and to a much less extent on the emetic center itself. This property makes it an excellent antiemetic. It has no anticonvulsant action but does antagonize the action of caffeine and amphetemine. Chlorpromazine has a pronounced effect on the regulation of body temperature. It increases heat loss through its peripheral vasodility action and by its ability to interfere with heat conservation by what seems to be an action on the diencephalon. Chlorpromazine causes coronary vasodilation and antagonizes cardiac arrhythmia initiated by epinephrine. When given intravenously or intramuscularly in large doses it frequently produces a sudden fall in blood pressure as a result of its dual action in depressing central vasomotor mechanisms and dilating peripheral vessels. Gynecomastia and lactation have followed large doses, and appetite is frequently stimulated.

RESERPINE

In 1931, Siddiqui and Siddiqui[2] who first isolated

the crystalline alkaloids contained in the roots of Rauwolfia Serpentina, state that the "snake-root" plant is described in the older literature as "a febrifuge, a remedy for snake-bites and a cure for dysentery and other painful affections of the intestines. In later times, the drug has gained the reputation of being a general sedative and a cure for certain types of insanity". Reserpine, believed to be the most active of these alkaloids, was identified by Muller et al.[3] The latter observations led very rapidly to the clinical use of reserpine in the treatment of hypertensive disorders. Clinical experience soon indicated that a state of tranquilization, without a significant impairment of the sensorium, neuromuscular coordination or arousability, can be induced in disturbed patients by administration of adequate doses of reserpine.

Luttrell and Morrison have presented evidence that such "tranquilizing" effect of single doses of reserpine (2.5 to 10. mgm intramuscularly) are more marked in patients exhibiting high "levels" of biological activity (e.g., "tension", "combativeness") regardless of clinical diagnosis. "This observation appears to apply also to the effects of repeated doses of reserpine over prolonged periods, and the same may be said of chlorpromazine."[4] Indeed, from descriptions that have appeared in the literature, the "tranquilizing" action of these two drugs would appear to be quite similar, the similarity extending even to some other effects and complications, such as lowering of blood pressure and body temperature, increase in appetite, miosis, nasal congestion, the development of Parkinsonian syndromes in some patients and seizures in others. Some cases of chlorpromazine addiction show tachycardia, photophobia, bouts of fever, constipation, jaundice, or dermatitis, while reserpine may produce depressive symptoms, bradycardia, diarrhea edema, cutaneous flushing, and conjunctival injection. Also, painful local infiltrates are more commonly produced by intramuscular injection of chlorpromazine than of reserpine.

Barsa and Kline[5] have emphasized a sequence of events during prolonged treatment of psychiatric patients with reserpine, which has not been reported to occur during chlorpromazine therapy. As already noted, two phases of behavioral change have been described in connection with prolonged chlorpromazine therapy; an initial state of "somnolence", which is succeeded by one of "indifference", and in some cases, concomitant attenuation or even disappearance of hallucinations and delusions. In connection with prolonged reserpine therapy, Barsa and Kline (loc. cit) delineate three phases: (1) A "sedative" phase, lasting three to ten days, in which the patient is quieter, less disturbed and rather drowsy; (2) A "turbulent" phase, which may endure from one day to three weeks, attended by augmentation of agitation, delusional and hallucinatory activity, feelings of "strangeness" and "loss of control", restlessness and mounting tension and anxiety; (3) An "intergrative" phase in which the "turbulence" subsides, the patients become more friendly and interested in the enviroment, and ". . . delusions and hallucinations gradually fade away until they seem to disappear." These investigators note that not all patients pass through these three stages, some showing no tendency to pass from the "turbulent" back to the "sedative" phase. However, they urge that therapy be continued despite the development of "turbulence" for a period sufficient to determine whether "integration" can be achieved in any particular case, and measures are suggested for the control of "turbulence" for a period.

What is the primary site of action of the tranquilizing agents? There is probably not a single primary site at which all drugs of this general class act. The interruption of transmission at any of several levels in a complex pathway can be expected to produce much the same overt effect. Reserpine, in particular, appears to depress the hypothalamic centers and seems to exert their major effects in the reticular formation in the mid-brain which is also the center for regulation of autonomic nervous system.

The literature on chlorpromazine and reserpine is uniform in at least one respect: there appears to be general agreement that the drugs reduce overactive, destructive, or assaultive behavior in the majority of agitated, psychotic patients regardless of clinical diagnosis, although in the case of reserpine, a "turbulent" state is described, which may or may not be transient in individual cases. With reference to schizophrenia, statements are often made that, in addition to "tranquilization", such therapy results in the eventual disappearance of hallucinations, delusions, and other "secondary" symptoms, but whether this can be attributed to the direct effect of the drug is a moot question, and the few well-controlled studies that have been done suggest that the "primary" defects in thinking and effect are not altered to any great degree.

In regard to their efficacy in the treatment of other "mental" disorders, it appears that they are of dubious value in the management of depressions, while spectacular results have been claimed for the

treatment of "toxic" psychosis (e.g., alcoholic delirum tremens).

Evaluation of the efficacy of azacylonol ("Frenquel") and meprobamate (Equanil, Miltown) is difficult to make, since the published reports on these drugs are few and discordant at the time of this writing.

The effectiveness is one of selective blocks set up by the drugs, evident in such things as the abolition of conditioned reflexes without affecting unconditioned reflexes, the abolition of carotid sinus hypertension without producing other conspicuous effects on blood pressure, a tendency to hypothermia, and other changes in the autonomic nervous system.

Lothar B. Kalinowsky[6] says "results of all somatic treatments in psychiatry are still highly inadequate, and those of us who have seen the appearance of most of these methods during the last 20 or more years, and who have worked with all of them, must realize that none of them entirely replaced the previous ones. What is necessary, however, when a new method appears on the scene, is to re-evaluate the indications of the other treatment procedures. The main indication for all somatic treatments in psychiatry is schizophrenia. In this largest group of psychotic patients the application of insulin treatment, convulsive treatments, and psychosurgery must be re-evaluated in the light of the newer experience with pharmacotherapy".

One group of schizophrenics in which it is most tempting to use tranquilizers tolerates them very poorly. These are cases of severe catatonic excitement. In these patients who are endangered by dehydration and central fever, sudden collapse with fatal outcome seems to have occurred in some instances when large amounts of the tranquilizing drugs were injected. Also, in other conditions associated with a state of acute excitement, caution is in order with the administration of the newer drugs. In patients with catatonic excitement, repeated electric convulsions are extremely well tolerated even when the patient is dehydrated and has high fever.

The question has been raised whether the combination of chlorpromazine and reserpine with EST would decrease the number of shock treatments necessary to clear up a depression. Some clinical reports seem to indicate such possibility. However, there is increased evidence that medication with these drugs during EST is dangerous, probably due to the hypotensive effect of these drugs. Several otherwise unaccountable fatalities in patients treated with EST while under chlorpromazine ("Thorazine") illustrated the obvious danger of such combination. In one of these cases the first dose of 50 mg. chlorpromazine had been given orally in the evening, the second dose of 50 mg. four hours prior to the shock treatment to which the patient succumbed. No other medication had been given in these two cases, both of whom died under signs of cardiovascular collapse. Medication with reserpine appears to be even more dangerous in patients, subjected to EST, as was shown by several reports and some personal communications. Kalinowsky says that since, on the other hand, no evidence has ever been brought forward that the combination with the newer drugs improves the therapeutic effect of EST, it must be strongly advised not to administer EST for two or three days to patients under chlorpromazine. Experience with reserpine suggests an even longer waiting period.

A clinical observation made with increasing frequency is the occurrence of muscular restlessness in depressed patients treatment with chlorpromazine or reserpine. A typical example is that of a woman with an obsessive-compulsive syndrome lasting for many years and treatment for several months with both chlorpromazine and reserpine. The patient showed symptoms which were interpreted as agitated depression. Actually, the depressive effect was minimal, and the agitation was more of the nature of a muscular restlessness. The patient described something which in the literature of Parkinson symptoms has been called "Akatizia", or inability to sit still. Muscular quivering, as the patient described it, forced her to be on the move day and night. Repeated shock treatments had cleared up the slight depressive affect without influencing the muscular restlessness.

In manic episodes of manic-depressive psychoses, results with chlorpromazine and, apparently to a lesser degree reserpine, are quite convincing. Electric shock, on the other hand, is less reliable in its effect on the manic phase of manic-depressive psychoses than on the depressed phase.

A few other conditions may be mentioned briefly. Aggressive behavior in some organic brain conditions, particularly in mental defectives, had often been successfully controlled by a few EST's. This can now be done more safely and more consistently with the newer drugs. Also, acute symptomatic psychoses with schizophrenic-like symptomatology as they are seen in toxic conditions and infectious diseases may respond very well to chlorpromazine and reserpine. The tranquilizers are replacing EST in preventing

withdrawal symptoms in morphine and other drug addictions.

Many psychiatrists also feel that the tranquilizers help in establishing rapport in analyzing psychoneurotic disorders. Their use to counteract the psychotominetic drugs, such as Lysergic Acid and Messaline, has received much attention recently.

SUMMARY

The nature and action of some of the more important tranquilizers in use today has been discussed in relation to their toxic as well as beneficial effects. It has been noted that chlorpromazine and reserpine appears to reduce overactive, destructive or assaultive behavior in the majority of agitated, psychotic patients regardless of the clinical diagnosis. These drugs seem to exert their major effects in the reticular formation in the mid-brain and appear to abolish conditioned reflexes without affecting unconditioned reflexes.

The tranquilizers are replacing electric shock therapy and lobotomy in many psychotic patients. However, it must be emphasized that the newer psychopharmapeutic drugs must not completely replace other type of therapy, but should attempt to combine pharmacotherapy with previously known treatments.

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Most Headaches Don't Originate in the Head

If you get a headache, the cause probably isn't in your head. About 95 per cent of headaches result from conditions elsewhere in the body, according to an article in the March Today's Health, published by the American Medical Association.

"Such a simple thing as poor ventilation in a room, which results in an imbalance in the air you breathe, may cause a headache," said Dr. Adrian M. Ostfeld, University of Illinois College of Medicine, Chicago, in an interview with author Alfred Balk.

"Again, if you run a fever for any reason, the system is in an abnormal state and headache may result. If you skip a meal, your head may ache. If you concentrate on one task too long—whether it's reading or TV or driving a car—your muscles become strained, they overcontract, and then they cannot get enough blood. The result: headache.

". . . in the end, it [the headache] probably is the result of a release of a 'pain substance' from nerve ends in the scalp, at the same time that arteries in the head have become dilated due to one cause or another."

The most common type of headache results from concentration on, or preoccupation with, something for too long a time. It's also the easiest to cure, usually disappearing if one changes position, relaxes, and takes an aspirin. "Oddly enough, acetylsalicylate (aspirin) is an old standby, but we still aren't sure exactly what it does do."

Present medications have their place, but they all have shortcomings. The ultimate drug will act on the pain substance and thus control the headache safely. This depends on advances in tissue biochemistry which may take several years.

"One problem is that you can't give headaches to laboratory animals; this research has to be done in man."

Dr. Ostfeld said headaches serve as an important warning signal of both mental and physical problems. But he stressed that brain tumor, often feared by persons with recurring headaches, turns out to be the cause in only about 3 out of 1,000 cases.

Pre-Paid Medical Care....

Edited by
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Control and Regulation

This past March the General Assembly of Virginia was called upon to determine the extent to which Blue Cross operations should be controlled by a governmental regulatory authority. The outcome of the legislators' discussions and debates was an overwhelming majority vote to establish a new enabling act for the Plans which will impose upon them no restrictions that the Plans, as ethical business-like enterprises, have not from the first self-imposed upon their own operations.

This is all well and good, but it is disappointing that the vote was not unanimous—that at least a few of the public's representatives—despite the professed opinion of the State Corporation Commission itself—seemingly conscientiously believed a more stringent governmental regulation of Blue Cross would put a damper on the currently increasing costs of health-care. It is indeed disappointing that any representative of the public could be so confused about medical-economics that, while making pious protestations against the idea of socialized medicine, he advocated what effectually would be bureaucratic regulation of the activities of doctors and hospitals; that is, he actually proposed that which he decried.

The medical profession apparently still has more of a public-education job to do. It is hazardous to the continuance of our eminently successful free-enterprise system of providing health-care services to permit even a minority of the public and its representatives to hold the misconception that governmental regulation of health-services might make those services less expensive.

It is quite obvious, but perhaps the obvious should be pointed out to the public, that there are but three variables which influence Blue Cross rates: the cost of a day of hospital care, the number of days of hospital care utilized by Blue Cross members, and the administrative expenses of running a Plan. Because neither profits nor accumulation of capital are in the Blue Cross picture, any regulations of Blue Cross would be limited to regulation of these three variables.

Taking these variables in reverse order, a governmental "Regulator" could, of course, exert authority over a Plan's administrative expenditures. Whether or not his doing so would be necessary or productive, in view of the fact that each Blue Cross Plan has a quite capable Board of Directors which to date has successfully and astutely exerted such authority, is rather a moot question. In any event, a decrease in a Plan's administrative expense of as much as fifteen percent, if such were possible, would permit a reduction of Blue Cross rates of less than one percent—about 9¢ per month for a family contract. The Regulator would want to go further than this.

In his attempt to control utilization of hospital days, the Regulator would have to establish a mechanism whereby he could pass upon every hospital admission and every day of hospital stay. To do this job he would establish a "bureau" including sufficient personnel to permit individual investigation of all cases about to be hospitalized and a daily check on all cases in the hospital. One investigator per each doctor in the area would be necessary, but even with such a huge staff the Regulator remains skeptical about the decisions promulgated by his bureau because of the lack of medical knowledge of the staff. Accordingly, he then replaces each staff-member with a local doctor, and upon accomplishment of his one-for-one replacement program the Regulator finds that he is relying upon the individual professional judgment concerning hospital admission and length of stay of each patient's doctor—just like Blue Cross has done for the past twenty-five years.

Nothing daunted, the Regulator would turn to his last chance to control Blue Cross rates—through regulation of hospital operating costs. Here again he would have to be sufficiently brazen to believe he could do a better job than the economy-minded business men who serve as Trustees of their community hospitals. But our Regulator is indeed brazen, if nothing else.

The first hospital the Regulator inspects kindly gives him a free meal—and serves him spinach. Although he realizes the hospital purchases 20,000 other items, his personal antipathy to spinach—arising from a pertinent psychological trauma sustained dur-

ing his childhood—causes him to choose the hospital's annual expenditure for spinach as the first item for detailed investigation and control. Upon learning that the hospital enjoys the going market rate, or less, when it buys spinach, he properly decides he must go out of the hospital to pursue the matter further.

To shorten a very long and a most complicated story, as concerns regulation of the hospital's purchase of spinach, he pursues what a mathematician might describe as an "infinite regress". He goes to the market, he goes to the farmer, he goes to the fertilizer distributor, he goes to the fertilizer manufacturer; and at long last we find our intrepid Regulator, a bottle of castor oil in one pocket and a bottle of paregoric in the other, gallantly defying death as he scales the cliffs of the Peruvian coast, intent upon regulating the bowel movements of the local sea-gulls which, without any regulation in the past, have well-earned a world-wide reputation for producing guano of profuse quantity and of excellent quality.

Nonetheless, such is indeed an appropriate occupation for our Regulator. We wish him well as long as he stays in Peru, and we hope he has the company and able assistance of those who were instrumental in setting him up in business.

March of Medicine

The practice of medicine in widely scattered regions of the United States will be the subject of a special hour-long documentary to be telecast over the NBC-TV network on Friday, May 27, at 8:30 p.m. (EST).

The program, to be telecast in color as well as black and white, is another in the award-winning "March of Medicine" series produced and sponsored by Smith Kline & French Laboratories in cooperation with the American Medical Association.

Entitled "MD USA," the special report will depict the work of five American physicians in various geographical areas of the country as they provide care for a wide array of patients. Sequences were filmed in Alaska, Arizona, Louisiana, Pennsylvania and Wisconsin. Highlighting the understanding and skill of modern doctors, "MD UCA" focuses on:

Dr. William Mills, an orthopedic surgeon of Anchorage, Alaska, as he treats Eskimos at a remote clinic on the "frozen tundra" in the 49th state.

Dr. David B. Dolese, of Ganado, Arizona, in his practice dealing with "medical peculiarities" of the Indian tribes located on the great Navaho reservation.

Dr. Julius M. Fernandez, an obstetrician of Franklin, Louisiana, who, in addition to caring for his patients in the bayou country, finds time to participate in his town's civic affairs.

Dr. David G. Moyer, a typical "family doctor" of Lansdale, Pennsylvania, dispensing warm and kindly attention to his patients in a pleasant surburban atmosphere.

Dr. Daniel E. Dorchester, a "flying doctor" who travels by airplane to care for migrant workers along the watery frontier of Sturgeon Bay, Wisconsin.

To uncover these stories of the usual—and not so usual—work of American doctors a special filming camera crew traveled thousands of miles by dogsled, swampboat and jet airliner.

"MD International," last year's "March of Medicine" entry, won the Peabody Award for its contribution to international understanding.

The Medical Society of Virginia
Membership Roster

April 1, 1960

This roster is published as a service to the membership and your editors hope you will find it a handy and ready reference.

Although the list has been checked carefully, the State Office would appreciate being advised of any omissions or errors. Addresses shown are those used by the State Office for mailing purposes.

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Richmond, Va.

Weissman, Seymour P.
1409-22nd, N.E.
Canton, Ohio

Welburn, W. C.
3408 N. Glebe Road
Arlington, Va.

Welchons, George A.
Professional Building
Richmond, Va.

Weller, William F.
2331 Broadway, S.W.
Roanoke, Va.

Wellford, Beverley R.
Medical Arts Building
Richmond, Va.

Wells, Lewis E.
Fourth Street Ext.
Farmville, Va.

Wensel, Louise O.
No current address

Werner, W. A.
755 N. 8th St.
Wytheville, Va.

Wessel, H. Niels
207 National Bank Bldg.
Harrisonburg, Va.

Westmoreland, James P.
110 Maycox Ave.
Norfolk, Va.

Weyl, W. Leonard
4625 Old Dominion Dr.
Arlington, Va.

Weymouth, S. E.
Callao, Va.

Whaley, H. E.
Victoria, Va.

Wheeldon, Thos. F.
318 West Franklin St.
Richmond, Va.

Wheeler, Clayton E., Jr.
869 Field Road
Charlottesville, Va.

Wheeler, Paul C.
VA Hospital
Richmond, Va.

Wheless, James E.
1603 Franklin Rd., S.W.
Roanoke, Va.

Whicker, Charles F.
803 "C" Street
North Wilkesboro, N.C.

Whitacre, Samuel N.
8 South Washington St.
Winchester, Va.

White, A. D. F.
1461 Rivermont Ave.
Lynchburg, Va.

White, Arthur E.
4900 N. 37th St.
Arlington 7, Va.

White, Charles S.
1801 Eye St., N. W.
Washington, D. C.

White, Edward S.
Bloxom, Va.

White, Forrest P.
1400 Colonial Ave.
Norfolk 7, Va.

White, Fred D.
Bluefield Sanitarium
Bluefield, W. Va.

White, J. A.
112 Mayflower Apts.
Virginia Beach, Va.

White, M. J. W.
Luray, Va.

White, Ruth M.
2166 N. Glebe Rd.
Arlington 7, Va.

White, Stuart B.
P.O. Box 247
Blackstone, Va.

White, William James
1008 N. Highland Street
Arlington, Va.

Whitehead, Betty W.
Chatham, Va.

Whitehead, David C.
1306 Colonial Ave.
Norfolk, Va.

Whitehead, P. Cary
Chatham, Va.

Whitehead, W. M.
614 Harris St.
Juneau, Alaska

Whitehill, M. Richard
1202 N. Shore Road
Norfolk, Va.

Whitehouse, Francis R.
Medical Center
Lynchburg, Va.

Whitfield, James M., Jr.
1707 Park Ave.,
Richmond, Va.

Whitley, Ayer C.
Palmyra, Va.

Whitlock, S. B.
712 Botetourt St.
Norfolk, Va.

Whitman, W. R.
Lewis-Gale Hospital
Roanoke, Va.

Whitman, Wm. R., Jr.
Lewis-Gale Hospital
Roanoke, Va.

Whitmore, Charles W.
210 Langhorne Road
Lynchburg, Va.

Whitmore, Claire
214 Langhorne Road
Lynchburg, Va.

Whitmore, E. B. J., Jr.
S. W. State Hospital
Marion, Va.

Whitmore, Wm. H., Jr.
918 W. Princess Anne Rd.
Norfolk, Va.

Whitticar, Nancy S.
1409 Hanover St.
Fredericksburg, Va.

Whittle, Joseph Percivall
119-A Pickwick Ave.
Colonial Heights, Va.

Whitworth, F. D.
Front Royal, Va.

Wickstrom, James C.
Va. Beach Hospital
Virginia Beach, Va.

Wiesinger, Herbert
2015 Monument Ave.
Richmond, Va.

Wild, William B.
P. O. Box 26
Harrisonburg, Va.

Wiley, William B.
1516 Colonial Ave.
Norfolk, Va.

Wilfong, C. T.
1805 Monument Ave.
Richmond 20, Va.

Wilhelm, Morton C.
920 East High St.
Charlottesville, Va.
Wilhite, Philip A., Jr.
1100 Hamilton Ave.
Portsmouth, Va.
Wilkerson, Daniel C., Jr.
Box 24
Bedford, Va.
Wilkins, Wm. B.
Hunting Towers Apt.
Alexandria, Va.
Wilkinson, George L.
1104 Charles St.
South Boston, Va.
Wilkinson, Lawrence
15 Starling Ave.
Martinsville, Va.
Willard, Eugene L.
2166 N. Glebe Rd.
Arlington, Va.
Williams, Ann H.
Cavalier Drive & Holly Road
Virginia Beach, Va.
Williams, Armistead D.
C. & O. Hospital
Clifton Forge, Va.
Williams, Armistead M.
805 West Franklin St.
Richmond 20, Va.
Williams, Carrington
805 West Franklin St.
Richmond, Va.
Williams, Carrington, Jr.
805 West Franklin St.
Richmond 20, Va.
Williams, Charles L.
4814 Riverside Drive
Richmond, Va.
Williams, David H.
1942 Lewis Mountain Rd.
Charlottesville, Va.
Williams, Ennion S.
Life Insurance Company of Va.
Richmond 19, Va.
Williams, Fred M.
306 Medical Arts Building
Norfolk, Va.
Williams, George H.
106 Franklin St.
Petersburg, Va.
Williams, George Zur
National Institutes of Health
Bethesda 14, Md.
Williams, Gerald A.
Veteran's Administration
West Side Hospital
820 South Damen Ave.
Chicago 12, Ill.
Williams, Harold L.
12 Lynn Dr.
Newport News, Va.
Williams, H. Joseph
24 Terry Court
Staunton, Va.
Williams, Henry W.
133 Harrison St.
Petersburg, Va.
Williams, James P.
Richlands, Va.
Williams, John Mason
106 Franklin St.
Petersburg, Va.
Williams, J. S.
Dade City, Fla.
Williams, Louis Howard
2108 Huguenot
Richmond, Va.
Williams, Mark B.
8510 Patterson Ave.
Richmond, Va.
Williams, Mortimer H.
711 Medical Arts Bldg.
Roanoke 11, Va.
Williams, Pauline
2035 Monument Ave.
Richmond, Va.
Williams, Richard Kennon
2015 Monument Ave.
Richmond, Va.
Williams, Robert O.
Roanoke VA Hospital
Roanoke, Va.
Williams, Ruth F.
3603 Grove Ave.
Richmond, Va.
Williams, S. H.
Presidential Gardens
Alexandria, Va.
Williams, T. Frasier
3801 N. Fairfax Drive
Arlington, Va.
Williams, Tom A.
Middletown, Va.
Williams, Wesley
521 Pennsylvania Ave.
Norfolk, Va.
Williams, W. C.
Hillsville, Va.
Willis, Hugh H., Jr.
Chatham, Va.
Willis, James G.
1200 Prince Edward St.
Fredericksburg, Va.
Wilson, David C.
University of Virginia
Charlottesville, Va.
Wilson, Felix B.
R.F.D. 2
Montross, Va.
Wilson, Henry H., Jr.
Professional Bldg.
Richmond, Va.
Wilson, Lester A., Jr.
University Hospital
Charlottesville, Va.
Wilson, N. G.
1201 Matoaka St.
Norfolk, Va.
Wine, Jean F.
170 S. Main St.
Harrisonburg, Va.
Wine, John E.
203 Professional Bldg.
Harrisonburg, Va.
Wineland, Robert K.
425 Fort Hunt Rd.
Alexandria, Va.
Wingfield, Quinby, Jr.
Riverside Hospital
Newport News, Va.
Wingfield, R. Terrell
214 Langhorne Rd.
Lynchburg, Va.
Wingfield, William Lynn
1716 Park Ave.
Richmond 20, Va.
Wingo, Charles F.
2132 Wakefield Rd.
Richmond, Va.
Winkfield, J. Marshall
111 Massanutten St.
Strasburg, Va.
Winn, Thos. M.
Covington, Va.
Winn, W. C.
303 Stockston Lane
Richmond 21, Va.
Winslow, Francis E., Jr.
313-33rd St.
Virginia Beach, Va.
Winston, P. H.
Clarksville, Va.
Winston, William O.
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Portsmouth, Va.
Wise, Walter Paul
419 Old Centerville Rd.
Manassas, Va.
Wiseman, H. A., Jr.
990 Main St.
Danville, Va.
Wiseman, Henry A., III
990 Main St.
Danville, Va.
Wisoff, Carl P.
Norfolk Gen. Hospital
Norfolk, Va.
Wolcott, James M., Jr.
North Shore Point
Norfolk, Va.
Wolfe, Alfred L.
609 S. Jefferson St.
Roanoke, Va.
Wolfe, Frank B.
Rocky Mount, Va.
Wolff, Herbert D., Jr.
706 Duke St.
Alexandria, Va.
Wood, Amelia G.
212 West Franklin St.
Richmond 20, Va.
Wood, Henry W.
300 Wainwright Bldg.
Norfolk, Va.
Wood, James B.
1646 Keith Valley Rd.
Charlottesville, Va.
Wood, J. Edwin, Jr.
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Charlottesville, Va.
Wood, John T.
Burkeville, Va.
Wood, William H., Jr.
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Charlottesville, Va.
Woodhouse, R. W.
Virginia Beach, Va.
Wooding, Nat
Halifax, Va.
Woods, Paul A.
362 S. Laurel St.
Waynesboro, Va.
Woodside, Nina B.
Haymarket, Va.
Woodson, Frederick G.
Wainwright Bldg.
Norfolk, Va.
Woodson, J. B.
Lowesville, Va.
Woodson, William H.
2814 West Ave.
Newport News, Va.
Woodward, Doris
Middleburg, Va.
Woodward, Fletcher D.
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Woodward, John F.
c/o F. A. Van Patten
Virginia Beach, Va.
Woodward, L. K., Jr.
Box 112
Woodstock, Va.

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Hampton, Va.

Wright, Fletcher J.
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Petersburg, Va.

Wright, J. Alex., Jr.
Doswell, Va.

Wright, Thomas M.
7 Corners Medical Bldg.
Falls Church, Va.

Wrye, John C.
P.O. Box 37
Morro Bay, Calif.

Wyatt, Norman F.
3507 Ivor St.
Hopewell, Va.

Wycoff, Jack D.
Johnston Memorial Clinic
Abingdon, Va.

Wylie, Charles M.
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Baltimore 5, Md.

Wyman, Alvin C.
312 S. Washington St.
Alexandria, Va.

Wysor, Edwin S.
Mechanicsville, Va.

Wysor, Frank L.
Clifton Forge, Va.

Yaeger, John J.
P. O. Box 582
Lexington, Va.

Yao, William H.
Medical Arts Bldg.
Hopewell, Va.

Yarbrough, O. D.
Route #1
Centerville, Va.

Yates, Harry R., Jr.
2125 Rosalina Ave.
Roanoke, Va.

Yates, Munford R.
424 W. Washington St.
Petersburg, Va.

Yeatman, Julian H.
Fork Union, Va.

Yeatts, H. B.
855 Vieytes St., Martinez-
F.C.N.G.B.M.
Buenos Aires, Argentine

York, James R.
Hawthorne House
Berryville, Va.

Young, Charles Augustus, Jr.
Medical Arts Bldg.
Roanoke, Va.

Young, Charles G.
2718 Semmes Ave.
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Young, William A.
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Zack, Frank A.
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Albuquerque, N. M.

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Alexandria, Va.

Zeavin, Bernard H.
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Alexandria, Va.

Zetlin, Arnold
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Zfass, I. S.
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Wilkes Barre, Pa.

Zimberg, Yale H.
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Richmond, Va.

Zimmerman, Gordon A.
200 E. Broad St.
Falls Church, Va.

Zimmerman, Wm. W., III
1805 Monument Ave.
Richmond, Va.

Ziv, Louis B.
113 West Road
Portsmouth, Va.

Zylman, Jacob Derk
6318 Willston Drive
Falls Church, Va.

Current Currents

FORAND BILL: As this issue of Current Currents goes to press, the Forand Bill is far from dead. Although the Bill was defeated by a vote of 17 to 8 in the House Ways and Means Committee, there are signs that proponents of such legislation will try again this Spring. It is now more important than ever that each physician call or write his Congressman at once. The importance of writing cannot be stressed strongly enough. Members of Congress are constantly calling for letters on important issues. This gives them something concrete upon which to base their stand.

SOCIAL SECURITY: Over 2,000 members of The Medical Society of Virginia have participated in the Society's poll on compulsory coverage of physicians under Social Security. The results thus far indicate that 65 per cent of those responding are opposed to compulsory coverage.

Information recently received from Washington indicates, however, that physicians will more than likely be brought into the Social Security system this year. The Ways and Means Committee has voted to take them in, and has reported that the decision was reached after a number of state and local groups announced they are in favor.

KEOGH-SIMPSON: The Senate Finance Committee has received a long awaited report from the Treasury Department on H.R. 10. The report outlines the Department's opposition to the Bill, but also explains a substitute proposal which would permit self-employed persons to create retirement programs with limited tax advantages.

The proposal would require such persons, including members of partnerships, to make it possible for employees to enjoy the same benefits they arrange for themselves. It is reported that the amounts which could be set aside would be somewhat less than those authorized under H.R. 10.

SELECTIVE SERVICE: It now appears that the Berry program will produce a surplus of physicians for the Armed Forces this year. According to the Washington Report on the Medical Sciences, notices have been sent to 105 residents that billets are not available for them in their specialties, and uniforms of choice. These physicians had expected to start active duty this year.

These young men are being notified by the Army and Navy (Air Force unaffected) that they may elect to affiliate with a ready reserve unit, transfer to another military arm which has a vacancy, or request active duty as general medical officers rather than as practitioners of the specialties for which they received Berry plan deferment.

VA HOSPITALS: Activities and policies of the Veterans Administration's medical program are apparently receiving close study by the House Appropriations Committee. A transcript of hearings conducted several weeks ago has been released and reveals intensive interrogation of VA officials on financial means of hospital patients. Other matters covered were relations of staff physicians with organized medicine, the "home town care" program and funds earmarked for research. The tone of the hearings would indicate that some VA requests will receive rough treatment.

INCOME OF OLDER POPULATION: The annual income of the nation's older population—those 65 and over—has increased by at least $6 billions in the aggregate since the mid-Fifties. According to the Insurance Economics Society of America, the income of this group is currently at the $30 billion level. This rate of growth is in keeping with the general rise in income levels and the progress of the economy during that period. There are now 15 million persons 65 and over as compared with 13½ million in 1954.

Data compiled by the U. S. Department of Health, Education and Welfare indicates that approximately $2 out of every $3 of this income is the result of voluntary employment, individual savings and investment programs, home ownership and pension plans and annuities. Thus, the importance of the individual's own preparation for the financial needs of later life is clearly evident, especially with respect to saving and spending decisions during productive years.

HEALTH INSURANCE: Members are requested to give special consideration to a new leaflet entitled "Let's Use, Not Abuse Health Insurance". The leaflet has been prepared by AMA and is one of the best things of its kind to be published in a long time. It spells out specific responsibilities that patients, hospital personnel, unions, employers and physicians themselves must share if the line is to be held against the increasing costs of medical insurance.

Some of the points emphasized in the leaflet are (1) "Consider your health insurance an investment. Know what it is, what it can and cannot do, and how to use it properly; (2) Don't expect health insurance to pay every expense related to health maintenance; (3) Don't pressure your physician into hospitalizing you unnecessarily. Some procedures can be performed with equal safety and efficiency and greater economy in the physician's office, and (4) Remember—you don't have to collect on your insurance to win. You win when you are spared the economic and related consequences of accident or illness against which your insurance protects you."

HAVE YOU CONTRIBUTED THIS YEAR TO THE AMERICAN MEDICAL EDUCATION FOUNDATION?

Woman's Auxiliary....

President—Mrs. Walter A. Porter, Hillsville
President-Elect—Mrs. F. Clyde Bedsaul, Floyd
Vice-Presidents—Mrs. A. B. Gravatt, Jr., Kilmarnock
Mrs. M. M. Bray, Suffolk
Mrs. H. I. Kruger, Norfolk
Recording Secretary—Mrs. Robert B. Keeling, South Hill
Corresponding Secretary—Mrs. J. Glenn Cox, Hillsville
Treasurer—Mrs. James M. Moss, Alexandria
Publication Chairman—Mrs. Custis L. Coleman, Richmond
Directors—Mrs. Charles A. Easley, Jr., Danville
Mrs. John R. St. George, Portsmouth
Mrs. Lee S. Liggan, Irvington

Second Annual Workshop.

The second annual workshop of the Auxiliary was held on February 10th at the headquarters building of The Medical Society of Virginia in Richmond. The theme of the workshop was Individual Responsibility for Better Community Health. Mrs. Walter Porter, president, called the meeting to order and then turned it over to Mrs. F. Clyde Bedsaul, president-elect, who was the presiding officer.

The following talk was given by Mrs. Cynthia N. Warren, Director of Health Personnel Program of the Virginia Council on Health and Medical Care:

HEALTH CAREERS RECRUITMENT PROGRAM

The shortage of manpower in the field of health poses the greatest threat not only to our present health services, but to the future of medical science as well.

In order to assist in meeting the shortage of personnel in the health field, the Virginia Council on Health and Medical Care developed a Health Careers Recruitment Program. This Virginia Council project is carried on with the cooperation of the health professions and state-wide organizations having major interest in health.

The purpose of the program is to assist young people in making a career choice and in calling their attention to the advantages of selecting a career in health. The following careers are included in the program: Audiology and Speech Correction, Dentistry, Dietetics, Health Education, Hospital Administration, Medical Record Librarians, Medical Technology, Medicine, Occupational Therapy, Podiatry, Practical Nursing, Pharmacy, Physical Therapy, Professional Nursing, Public Health Sanitation, Social Work, Veterinary Medicine, and X-ray Technology.

The Health Careers Recruitment Committee is composed of a representative from each of the professions, as well as a representative from the state-wide organizations. The Committee has provided assistance and guidance to the Virginia Council in setting up and administering the Health Careers Recruitment Program.

Major activities since the program was established in the early part of 1959, include the following:

"Career Kits" A "Career Kit" containing 42 pamphlets on the various careers in health has been placed in all private and public high schools in Virginia. The pamphlets were supplied to the Council by the professional organizations.

Fact Sheets on Careers in Health Each of the professions prepared a fact sheet giving information as to the type and length of education, tuition, scholarships, salary and the opportunities within the profession. A set of fact sheets has been placed in all Virginia high schools and single copies are sent to students requesting information on a specific career.

"Hey! About to Choose a Profession?" This is a three-fold pamphlet which supplies the student with some general information on careers in health. The pamphlet is designed so that one section has a listing of the 18 health careers and a place for the student to check the career in which he or she is interested. This can then be mailed to the office of the Virginia Council. The forms are received at the rate of 150 to 200 each month. The student is then mailed material on the profession in which he is interested and the name and address of the student is given to the professional representative who in turn makes a personal contact with the student. This personal followup helps to further stimulate the original interest of the student.

Health Careers Opportunities in Virginia This is a 16 page booklet that gives a line drawing and a description of 12 careers in the health field. A list of the approved schools in Virginia for each of the health professions is included in the booklet. A revised issue of this booklet will be available by early summer and will describe 18 careers in health.

Your Future in the Field of Health This is a poster which along with other material has been placed in the Virginia high schools. The poster shows two young people looking into the future and in their line of vision are the careers in health.

Career Day Programs When invited to participate

in career day programs, an exhibit showing the various careers in health is used. The exhibit is colorful, and the slogan "A Career in Health Offers the Most" attracts the attention of the young people.

Assembly Programs on Careers in Health Upon completion of the school year 1959-1960, programs will have been presented in 74 schools to more than 27,000 students. Local groups or clubs of the Virginia Federation of Women's Clubs, Congress of Parents and Teachers, The Woman's Auxiliary to The Medical Society of Virginia, The Virginia Tuberculosis Association, local hospitals, hospital councils or hospital administrators, and others schedule and arrange the programs in the schools. At least 50 minutes is needed to present the program. A film on health careers is shown and the remainder of the time is used in discussion.

Health Career Films A list of available films on careers in health will soon be mailed to the counselors in Virginia high schools. This list will also be sent to the State Department of Education with a suggestion that up-to-date films on careers in health be included in the next publication of the film catalogue which is used by the public schools in Virginia.

The Virginia Council on Health and Medical Care, through the support and cooperation of professional and lay groups, is offering this program in an effort to assist in solving the shortage of manpower in the health field.

Inquiries regarding this program should be directed to Mrs. Cynthia N. Warren, R. N., Director, Health Personnel Program, Virginia Council on Health and Medical Care, 100 East Franklin Street, Richmond 19, Virginia.

Fairfax.

The Auxiliary to the Fairfax County Medical Society held its monthly luncheon March 2nd at the Court House Country Club. Mrs. Carl P. Parker, Jr., president, received large cartons of medical supplies donated by the members' husbands to be sent to Medico overseas. The other members of this years board are Mrs. Gerard J. Inguigiato, president-elect; Mrs. Henry Kulesher, treasurer; Mrs. William J. Reardon, correspondence secretary; and Mrs. Peter Soyster, recording secretary.

During the meeting, Mrs. Parker announced that Mrs. T. B. McCord, Mrs. Henry Kulesher and she had prepared lunch for the children at the United Cerebral Palsy Development Center in Falls Church the week before. This is something the school hopes other women will volunteer to do. In this way, the handicapped children have lunch every day at school which is the only way they ever eat away from home.

Throughout the week of March 27th there were displays in various drug stores in the area showing the extra and charity services on ward rounds and clinics which doctors give. The centers were Falls Church, Vienna, Fairfax, Annandale, Seven Corners and Willston.

Mr. Frank Iams, Administrator of the Fairfax Hospital, was guest speaker. He told of the new hospital as a physical building. The outside is completed and is a very impressive seven stories. The inside should be finished by November. The Director of Nurses is now recruiting and applications are out. They hope to interest nurses in a hospital in the suburbs of Washington. Mr. Iams stated one of his greatest needs was for a large and active volunteer group in every phase of hospital work.

Mrs. C. Barrie Cook, *Publicity*

Woman's Auxiliary to the American Medical Association.

The Thirty-Seventh Annual Convention of this Auxiliary will be held at Miami Beach, Florida, June 13-16, with headquarters at the Hotel Deauville. A cordial invitation is extended to all members of the Auxiliary, their guests, and guests of physicians attending the convention, to participate in all social functions and attend the general meetings of the Auxiliary.

The convention will formally convene on June 13th with reports of officers and chairmen and election of the nominating committee. The annual tea and fashion show honoring the president, Mrs. Frank Gastineau of Indianapolis, and the president-elect, Mrs. William Mackersie of Detroit, will be held that afternoon.

A special water safety program will be conducted at the hotel pool on Tuesday afternoon. This will be under the auspices of the Dade County chapter of the American Red Cross. National past presidents of the Auxiliary will be honored at the Tuesday luncheon.

Election and installation of new officers will be the principal order of business during Wednesday's sessions and a program of films on recruitment, aging and other worthwhile projects will be presented Thursday morning.

A full schedule of activities—ranging from dancing and ping pong to boat trips and tours—is being arranged for the teen-aged members of A.M.A. families.

Miscellaneous....

Forand Bill.

The following letter was written to all Virginia Congressmen by Mr. T. T. Curtis, President of the Virginia Farm Bureau Federation. It is an excellent letter and it is felt all members of the medical profession should read it.

March 17, 1960

To Virginia Congressmen:

It is our understanding that the Forand Bill, or some variation thereof, will shortly be before the Congress for consideration.

Congressman Forand and others who support his and other proposals for socialized medical care and hospitalization are not alone in their concern for the health and welfare of people generally. All of us are concerned with the problem of getting the best possible medical care at the lowest cost.

The question then, is simply one of how can this altogether desirable objective best be accomplished.

Under the Forand Bill, all persons receiving social security payments would be, within certain limitations, entitled to free medical care and hospitalization. The abuses that would arise under such a program would in our opinion force the cost of medical care and hospitalization to fantastic heights.

Even under the best of circumstances, it is frequently impossible for our finest diagnosticians to distinguish between patient ailments which are very real or only imaginary.

Free care will vastly complicate this difficulty by stimulating the development of imaginary ailments among certain classes of people, the result of which might well increase the patient load to the point where we would lack the money and facilities required to take care of our real needs.

Farm Bureau has the largest of any subscriber group now participating in the Virginia Blue Cross-Blue Shield Plans, and we have a representative serving on the Board of Directors of both Plans. With each of these Plans it has been necessary to introduce a co-insurance feature in the form of a $50-deductible contract in order to keep the premium within reach of the average subscriber. Under the old, full-coverage contracts, there were instances of where young couples would put grandma in the hospital for a two-week rest and check-up while the family took off to Florida for a two-week vacation. If the family doctor refused to cooperate in such a scheme, he would be rewarded for his good conscience by the loss of a patient.

Under the Forand Bill, arrangements of this sort would be multiplied thousands of times and the burden would fall on the back of the working force.

Even without the Forand Bill, social security payments now total $288 per year, per employee, or six per cent on the first $4800 of the employee's annual earnings. One-half of this is paid by the employer, but it is a part of the employee's wages just the same.

Between now and 1969, social security taxes are scheduled for three more jumps, bringing the total to nine per cent on the first $4800 or $432 per employee.

It has been estimated that new entrants into the social security program will pay $1.69 for every $1.00 they will get in the form of benefits. This fleecing of the young through the further extension of unearned benefits would, in our opinion, be vastly aggravated by the enactment of the Forand Bill.

Few of us are fortunate enough to be able to set aside more than 10 per cent of current earnings for the inevitable "rainy day." If the margin available is forcibly collected for a program that will return only $1.00 for each $1.69 invested, the citizen is not only defrauded—he also is prevented from carrying out an intelligent savings and investment program on his own account.

It has been our observation that most people in our middle income groups are able to arrange to meet the costs of their real needs for medical care and hospitalization reasonably well. For the medically indigent, assistance is furnished from many sources to such an extent that a penniless tramp can and does get better medical care in the United States than is available to the wealthy and well-to-do in many countries.

For these and other reasons, we sincerely hope that you will vigorously oppose the passage of the Forand Bill.

Very truly yours,

T. T. Curtis, President

Mr. Curtis received the following wire from the Washington office of the Virginia Farm Bureau Federation on April 4th:

After rejecting Forand Bill providing hospital and other services, Ways and Means Committee considering other amendments to Social Security. Proposal under discussion to increase earnings subject to the tax from $4800 to $6000. Urge wire Wilbur Mills, chairman and your Congressman on Ways and Means Committee opposing proposed increase and any amendments increasing costs and benefits.

The following is a copy of the telegram which he sent in reply:

April 4, 1960

Hon. Wilbur Mills, Chairman
House Ways and Means Committee
House of Representatives
Washington, D. C.

Strongly urge your Committee take no action to either increase costs or expand benefits of Social Security Program.

Further increases in costs over 9% scheduled for 1969 will make it extremely difficult for average citizens to put aside rainy day savings in addition to benefits earned under social security program.

Extension of unearned benefits has already led to situation where new entrants are estimated to receive only one dollar in benefits for each dollar and sixty-nine cents contributed.

The further aggravation of this deplorable situation plus future uncertainties regarding purchasing power of dollar savings could easily convert program into one of Social insecurity.

Circumstances require that citizens be allowed some margin for sound security investments over and above compulsory contributions into Social Security, the benefits of which for most, are likely to fall far short of retirement requirements.

T. T. Curtis, President
Virginia Farm Bureau Federation

Ulcer Not Rare in Youth

Junior could get a peptic stomach ulcer before his "old man". And if his father does develop the ailment, it may have started in his youth. These are the conclusions of three Chicago physicians reported in the February American Medical Association Journal of Diseases of Children.

"Despite its relative infrequency, peptic ulcer in children should not be considered rare. The true incidence of peptic ulcer in children cannot be evaluated on the basis of the recorded cases, since these undoubtedly represent a small fraction of the total number of children with the disease. In many cases, symptoms are entirely lacking and the condition is identified only at operation or autopsy."

Drs. Alberto Ramirez Ramos, Joseph B. Kirsner, and Walter L. Palmer of the University of Chicago department of medicine cited studies showing that out of 1,000 adult patients with duodenal ulcer, 26 of them had symptoms traceable as far back as 4 years of age, and out of 1,000 with gastric ulcer, 16 had symptoms that dated from childhood.

From their own experience with 32 cases of peptic ulcer in children up to age 15, observed from 1936 to 1958, they concluded that:

—Chronic peptic ulcer in children is more frequent in males than in females at all ages.

—Symptoms of peptic ulcer are vague in children until the age of puberty when they begin to resemble those of adults.

—Duodenal ulcers exceed gastric ulcers.

—Chronic peptic ulcer in children is more frequent than acute ulceration and often remains unrecognized for long periods.

—Medical management with avoidance of gastrointestinal irritants in food and medication, frequent antacids, and sedation, is effective in the majority of children with peptic ulcer.

—As in the adult, surgical management may be necessary in childhood peptic ulcer complicated by hemorrhage or perforation.

The cause of peptic ulcer in children remains as obscure as its occurrence in adults, the researchers noted. However, in the four cases of acute peptic ulceration among the 32 patients, cerebral damage and certain drugs may have been implicated as causative factors.

Editorial....

The Care of the Terminal Cancer Patient

ONE OF the many questions that perplex a medical editor is whether a magazine, news release, drug journal or other related publication he may receive is distributed widely throughout the medical profession in his area or whether he is one of relatively few physicians who may have seen it. If the article which occasioned the question appears worthy of special mention or reprinting, the disturbing thought arises that perhaps all the other physicians in Virginia also have seen this item, for nothing is staler than a twice-told tale.

Such a magazine came to hand recently. Many Virginia physicians, no doubt, receive the C A Bulletin of Cancer Progress, which is published bimonthly by the American Cancer Society. At the risk of asking the reader to do something he has already done, it is recommended that every physician who treats cancer patients read carefully the January-February issue of C A. With the exception of a four page news letter the entire publication is devoted to the terminal care of cancer patients and closely related subjects.

Four full length original articles deal with medical indications for prolonging the life of a patient with advanced cancer, the theological aspects of the same subject, a psychiatric approach to the dying patient which psychoanalyzes the attending physician as well as the victim of the disease and the misuse of narcotics in terminal malignancies. Twenty articles which have appeared in the British and American literature on this general subject during the past century and a half are abstracted. These deal with euthanasia, the legal aspects of discontinuing active measures to prolong life and palliative therapy. The British writers appear somewhat more philosophical in their approach to the care of the terminal patient and on the whole a bit more merciful.

The symposium was the outgrowth of the varied reactions of a number of physicians to the illustration on the cover of the May-June (1959) issue of C A and an article in the same publication by Dr. Edward H. Rynearson, of the Section of Medicine of the Mayo Clinic. Some thought the cover illustration, a well-known woodcut by Rethel, which depicted the figure Death tolling a cathedral bell to mark the passing of an elderly man was morbid despite the caption "Death the Friend". Most of the criticism was directed at Dr. Rynearson's thought-provoking article entitled "You are standing at the Bedside of a Patient Dying of Untreatable Cancer". The author stressed the fact that his hypothetical patient had received all the usual and perhaps the extraordinary measures as well, without avail. The patient, his relatives and his spiritual adviser were aware of the situation. Under these conditions it was Dr. Rynearson's

conviction that the physician should do all in his power to alleviate the patient's suffering but make no further effort to prolong his life.

Some thought this was depressing and out of place in a publication of this type which they felt could better be devoted to diagnosis and therapy. There were dark references to euthanasia which probably served a useful purpose for they gave C A an opportunity in its Winter issue to point out the original definition: "An easy death or means of inducing one" in contradistinction to the secondary and more malign meaning of an "Act or practice of putting to death persons suffering from incurable and distressing disease."

As a result of the criticisms occasioned by the May-June number of C A, queries were sent to American surgeons and physicians engaged in various aspects of the cancer problem requesting their reactions to the controversial points raised in that issue. Five replies were critical and 34 were favorable. All of the replies were presented in a Symposium on Terminal Care in the current issue and quoted at considerable length. As one would expect, many conflicting views were expressed. Probably the most frequently expressed thought was best summarized by an English physician, Lord Horder, who, in discussing voluntary euthanasia in 1936, stated, "The doctor's duty is to cure patients of their diseases, to cure them 'safely, quickly and pleasantly.' If that ideal cannot be achieved, then his duty is to prolong life as far as may be and to relieve pain, that 'worst of evils,' both bodily and mental. (Be it observed that) the good doctor is quite aware of the distinction between prolonging life and prolonging the act of dying. The former comes within his reference, the latter does not."

Harry J. Warthen, M.D.

News Notes....

New Members.

Since the list published in the April issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

George W. Basany, M.D., Falls Church
David M. Brillhart, M.D., Abingdon
Charlotte P. Donlan, M.D., Falls Church
John Thomas Edmonds, M.D., Accomac
Samuel Teel Ellis, M.D., Richmond
Edward Harrison Hancock, Jr., M.D., Lynchburg
William Louis Harris, M.D., Falls Church
Claude K. Hylton, M.D., Manassas
Hubert Algernon Marshall, M.D., Charlottesville
Harry M. McDermott, M.D., Fairfax
Edward Charles Paarfus, Jr., M.D., Stuart
Carlos Amat Recio, M.D., Staunton
Victor Skorapa, Jr., M.D., Pulaski
Thomas Uriah Vermillion, M.D., Hampton
Thomas Elijah Wheless, M.D., Roanoke
Ruth Frances Williams, M.D., Richmond

Dr. Charles M. Caravati,

Richmond, is the new councilor-elect from the State of Virginia for Southern Medical Association. He will be installed at the annual meeting in St. Louis, October 21-November 3rd.

Miami Meeting of American Medical Association.

Miami Beach promises ideal weather and vast entertainment facilities for the 109th annual meeting of the American Medical Association, June 13-17. Temperatures average from 75 to 85 in June. The Beach escapes the extremes of heat and cold by virtue of the warm waters of the Gulf Stream and its peninsular location.

An estimated 125,000 visitors can be accommodated in Miami Beach at any given time. Including metropolitan Miami, there are a total of 917 hotels and motels with 55,600 rooms.

After attending the scientific sessions of the meeting, there will be plenty of opportunity for swimming, skiing, skin diving, fishing, golfing, sightseeing, or what have you. For nighttime diversion, Miami Beach features some of the nation's top stars and revues at smart supper clubs along with many fine restaurants.

The American Medical Golf Association

Will hold its 44th Annual Tournament at the Diplomat Hotel and Country Club, Hollywood-By-The-Sea, Florida, Monday, June 13th. Membership in the AMGA is available to any member of the American Medical Association and is a lifetime membership. There are no annual dues, only the original membership fee of $3.00 paid at the time of joining. Tournament fees are paid by participants. Anyone interested in joining should secure an application form from John A. Growdon, M.D., 1324 Professional Building, 11th and Grand Avenue, Kansas City, Missouri.

The Diplomat features one of the country's outstanding 18 hole championship golf courses facing the inland waterway and overlooking the ocean. There are over 400 beautifully landscaped acres and Cary Middlecoff, former U. S. Open Champion, is pro of the golf course.

Medical Research Laboratories.

The four story laboratory addition to the Cancer Research Building at the University of Virginia was officially opened in February. It has been named the Mary Stamps Suhling Laboratories. Work will range from cancer research to investigations into diseases of pregnancy. The new addition is only the first part of a plan for building the research facilities. Future plans contemplate a seven story addition, providing 25,000 square feet of laboratory research.

News from Health Department.

Dr. John W. Gales has completed his preliminary orientation with the State Department of Health and has assumed his position as director of the Carroll-Grayson-Galax Health District. Dr. Gales has headquarters in Galax.

Also Dr. Marion Edmonds has completed her preliminary orientation and has assumed her position as director of the Henry-Patrick-Martinsville Health District. Dr. Edmonds has headquarters in Martinsville.

Hampton Medical Society.

At the meeting of this society on March 2nd, Mr. Frank S. McIntosh, president of the U. S. Business

and Estate Planning Service spoke on "Estate Planning in a Changing World".

New officers of this society are: Dr. Helen Dorsey, president; Dr. Philip Murray, vice-president; and Dr. L. M. Lieberman, secretary-treasurer.

Cancer Discussion.

A public panel discussion on cancer was held in Williamsburg the latter part of February. Dr. Hugh G. Stokes, Williamsburg, president of the local cancer unit, was moderator. Panelists were Drs. Baxter Bell, Jr., and George Oliver, Williamsburg; Dr. Robert J. Faulconor, Norfolk; and Dr. George Cooper, Jr., Charlottesville.

The discussion was planned by the Williamsburg-James City County unit of the American Cancer Society as part of its educational program.

Staff of Hospital.

The John Randolph Hospital, Hopewell, has elected the following medical staff: Chief of Staff, Dr. J. G. Easterling; Assistant Chief of Staff, Dr. A. T. Brickhouse; Secretary, Dr. W. P. Youngblood; Executive Committee: Drs. J. G. Easterling, A. T. Brickhouse, W. P. Youngblood, D. C. Booker, and C. H. Dougherty; Medical-Administrative Committee: Drs. D. P. Moore, chairman, W. M. Phipps, and C. A. Robbins; Tissue and Auditing Committee: Dr. C. H. Dougherty, chairman, and Drs. P. C. Yerby and J. V. Bowyer, with Dr. G. T. Mann as consultant; Dietary, Dr. J. V. Bowyer; Pharmacy, Dr. H. E. Berger; and Library, Dr. Edith I. Miller. Chiefs of various services are: General Surgery, Dr. D. C. Hooker; General Medicine, Dr. N. F. Wyatt; Pediatrics, Dr. W. H. Stout; Obstetrics, Dr. T. C. Andrew; Anesthesia, Dr. W. P. Youngblood; Radiology, Drs. Miller and Pearce; Pathology, Dr. C. L. Saylor; and Emergency Service, Dr. W. H. Yao.

State Board of Medical Examiners.

The next meeting of the Virginia State Board of Medical Examiners will be held in Richmond June 13th. The examinations will be held June 14-17. All applications and other documents pertaining to the examination or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 20th. The secretary is Dr. K. D. Graves, 631 First Street, Southwest, Roanoke, Virginia.

New King William Clinic.

The Aylett Medical Clinic was opened on March 1st. Dr. A. W. Lewis, Jr., is its owner and director. The Clinic has rooms for x-ray and minor surgery, a laboratory, three examining rooms, two waiting rooms, doctors' offices and a reception room. It will serve patients from King William, King and Queen, and Essex Counties.

American Board of Obstetrics and Gynecology.

Applications for certification, new and reopened, Part I, and requests for re-examination in Part II are now being accepted. All candidates are urged to make such application at the earliest possible date. Deadline for receipt is August 1, 1960.

Candidates are requested to write to the office of the secretary for a current Bulletin if they have not done so in order that they might be well informed as to present requirements. The secretary is Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6, Ohio.

International Congress of Physical Medicine.

The third International Congress will be held August 21-26, 1960, at The Mayflower Hotel, Washington, D. C.

The preliminary prospectus covering the conference carries in detail information on registration, application to present a paper, a scientific exhibit, a scientific film, etc. A copy of this preliminary program may be had from Dorothea C. Augustin, Executive Secretary, 30 North Michigan Avenue, Chicago 2, Illinois.

Rocky Mountain Cancer Conference.

The 14th Annual Rocky Mountain Cancer Conference will be held in Denver, Colorado, July 20-21. Tentative program plans call for a symposium on Skin Cancer and one on Thyroid Lumps. Afternoon sessions will be devoted to papers on cancer detection and treatment. The two-day conference will earn 10 AAGP Category I Credits.

This Conference will be held in the new thirty million dollar Denver Hilton Hotel which was opened on April 10th of this year. The completely air-conditioned 882 room hotel is one of the most modern in the country.

Wanted.

Male Psychiatrist, diplomate or with three years approved training, to join group practice 145-bed approved psychiatric hospital. Salary: $15,000

$18,000 first year; $20,000-$25,000 second with incentive factor. Write Box 700, care the Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

For Sale.

Used Picker portable x-ray machine—30 ma. Excellent condition. Contact Appalachia Hospital, Appalachia, Virginia. (*Adv.*)

For Sale.

Leitz photrometer, 40 test type, practically new, one year guarantee from manufacturer. Price $240.

Jones metabolism machine, used, excellent condition. Price $150.00

Addressograph, portable model 30, excellent condition. Price $100.00.

Reply to P. O. Box 815, Hopewell, Virginia. (*Adv.*)

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Office building in Marion, Virginia, 112 North Commerce Street, in center of town. Ideally designed for two physicians or a physician and dentist. All new, one story brick. All rooms paneled in charter birch or knotty pine. Hardwood floors, oil hot water baseboard heat. Adjacent parking area included. Two hospitals in town. Excellent opportunity. Contact James M. Suter, M.D., 712 Chester Street, Bristol, Virginia. (*Adv.*)

Situation Wanted.

Anesthesiologist, Board eligible, American born, Class A graduate, Virginia license. Six years general practice prior to anesthesiology residency. Available June 1, 1960. Write #750, care the Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

Doctor's Suite Available.

In medical building at very busy, large apartment community of 10,000, with immediate surrounding area of 20,000 more. Three rooms and bath. This is a wonderful opportunity. Contact L. F. Kettell, 313 North Glebe Road, Arlington 3, Virginia. Phone —Jackson 2-5004. (*Adv.*)

Obituaries . . . .

Dr. Benjamin Carroll Henson,

Louisa, died March 23rd, at the age of seventy-six. He was a graduate of the Medical College of Virginia in 1913. Dr. Henson practiced medicine in Wise County for forty-six years before his retirement several years ago. He was a past president of the Wise County Medical Society and had been a member of The Medical Society of Virginia for forty-seven years.

His wife and a daughter survive him.

Dr. Stafford Odell Handy,

Lynchburg, died March 26th of burns suffered six weeks ago. He was fifty-six years of age and a native of Patrick County. Dr. Handy graduated from the Medical College of Virginia in 1928 and limited his practice to Roentgenology. He was a member of The Medical Society of Virginia, having joined in 1933.

Dr. Handy had retired from practice because of health and was burned when his bed caught fire, apparently from smoking or a defective electric blanket. He was pulled from his bed by his nurse, after suffering second-degree burns over a third of his body.

His wife and three daughters survive him.

Dr. Arthur Hastings Taylor,

Suffolk, died March 31st. He was forty-three years of age and a graduate of the Medical College of Virginia in 1943. Dr. Taylor practiced in Brownsburg for eight years before locating in Suffolk in 1954. He was a past chairman of the general practice section of the medical staff of the Louise Obici Hospital. During World War II he served as a battalion surgeon in Europe and received a purple heart with oak leaf clusters. Dr. Taylor was an airplane pilot and a member of the Aircraft Owners

and Pilots Association. He had been a member of The Medical Society of Virginia since 1949.

His wife and three children survive him.

Dr. Robert Bruce Lawrence,

Richmond, died March 13th. He was sixty years of age and a graduate of the Hahnemann Medical College in 1923. Dr. Lawrence was a member of the State Board of Medical Examiners. He was a past president of the Richmond Academy of General Practice. He had been a member of The Medical Society of Virginia for twelve years.

His wife and a daughter survive him.

Dr. Marsteller

Be it resolved that the members of the Medical Society of Prince William County express their sorrow at the death of Dr. Emlyn H. Marsteller, healer of the sick and comforter of the troubled, who devoted his life to the people of Prince William County.

Born four score and three years ago, he was graduated from the Medical College of Virginia in 1902. After training and practicing in New York, he came to Prince William County in 1921. Walking, horseback, Model T, he answered the call of the distressed, going over muddy roads and snow-covered fields. He made known his presence at the sick bed by a loud bark which hid a soft heart. Having only his skilled hands and perceptive mind for diagnosis, the quality of his medical care was of the highest to the last. His soul left this world, as he desired, while sitting at his desk in his office on February 11, 1960. The medical profession has lost an esteemed member. The laity has lost a great friend. Truly, he was a physician in every sense of the word.

Be it further resolved that a copy of this resolution be sent to the Journal-Messenger, Northern Virginia Medical Bulletin, Virginia Medical Monthly, and to members of his family.

Alvin E. Conner, M.D.
Alfred J. Ferlazzo, M.D.
M. L. Nafzinger, M.D.

Dr. Leary

On January 1, physicians of the Arlington County Medical Society were saddened by the news of the death of their friend and colleague, Dr. John B. Leary.

Dr. Leary graduated from Georgetown University in 1932 with a degree of Ph.B. He subsequently received an M.A. from his Alma Mater. He matriculated at Temple University Medical School, from which institution he received his M.D. in 1939. In the following years, he had an internship at Miseracordia Hospital, Philadelphia, Pennsylvania, medical residency at St. Joseph's Hospital, Baltimore, and finally, a fellowship at Leahy Clinic in Boston. During World War II, he served in the Medical Corps of USN, being separated at Annapolis, Maryland, with the rank of Lieutenant Commander.

In 1946, he opened the Leary Weimer Clinic, where he continued to practice Internal Medicine with special emphasis on psychosomatic medicine. He was extremely active in both The Medical Society of Virginia and the Arlington County Medical Society, serving as Treasurer, Secretary and finally President of the latter in the years 1945-1948.

Because of ill health, he was forced to retire from the active practice of medicine in 1956. He continued his association with medicine by assuming the duties of Chief of Medicine of the U. S. Army dispensary, Fort Myer, Virginia, which position he held until his death.

Dr. Leary maintained memberships in the Arlington County Medical Society, Virginia State Medical Society, American Medical Association, and the American Psychiatric Society.

Dr. Leary was held in the highest esteem by his colleagues, not only for his professional ability but also his sound and concrete opinions concerning the encroachment of our Federal Government into the fields of the private practitioner. He spearheaded the fight for physicians' rights on this subject through the Association of Physicians and Surgeons.

With the untimely death of Dr. Leary, the medical profession loses a vigorous, consecrated member and loyal friend, who was willing to give his all for the benefit of mankind.

Therefore, be it resolved by the Arlington County Medical Society that we extend our sympathy to his bereaved widow and members of his family. Be it further resolved that these resolutions become a part of the minutes of the Arlington County Medical Society.

J. R. B. Hutchinson, M.D.
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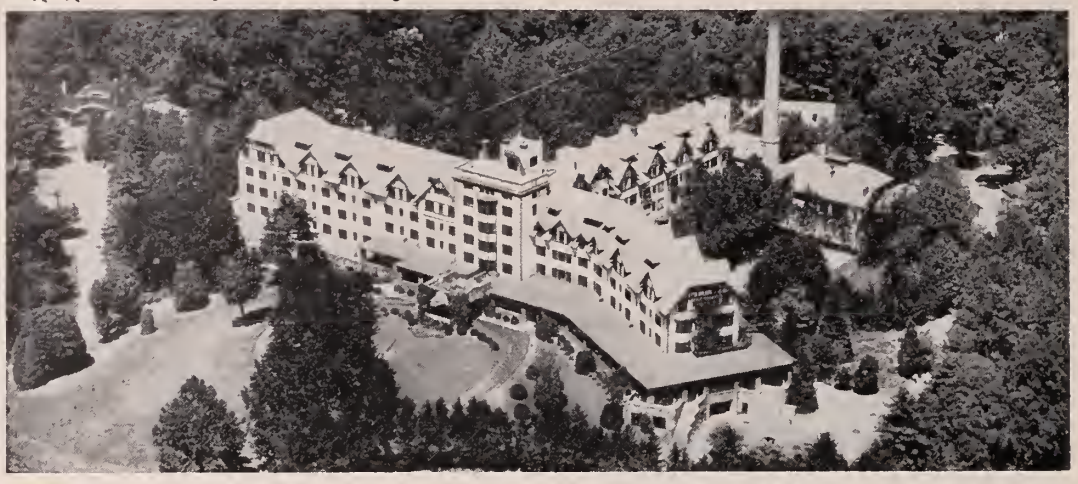
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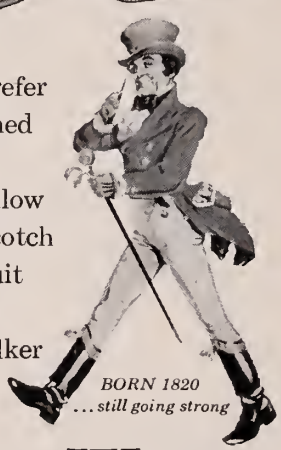
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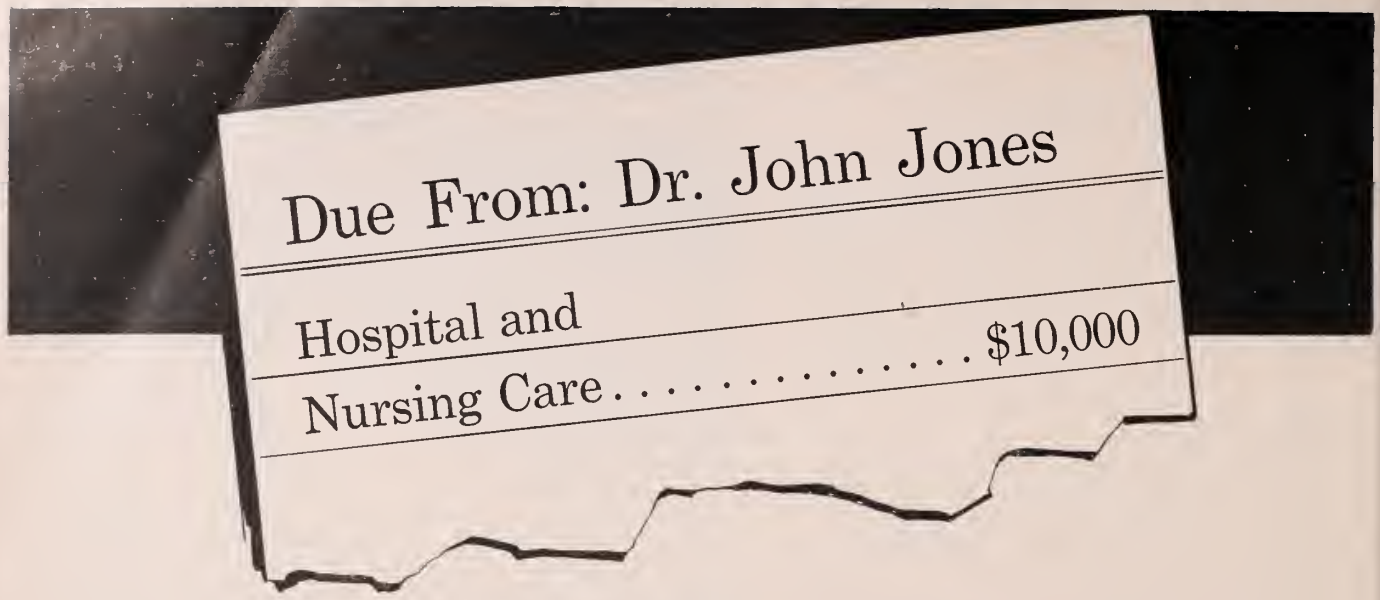
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1. Goodman, L.S. and Gilman, A.: The Pharmacological Basis of Therapeutics, 2nd Ed., Macmillan & Co., New York (1955).

2. Roberts, E.: Four Year Evaluation of an Antihypertensive Agent, J. Am. Med. Women's Assn. *13*:349 (1958).

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1. Kestler, O.: In The Pharmacology and Clinical Usefulness of Carisoprodol, Wayne State University Press, Detroit, 1959. 2. Berger, F. M.; Kletzkin, M.; Ludwig, B. J.; Margolin, S., and Powell, L. S.: J. Pharm. Exp. Ther. *127*:66 (Sept.) 1959. 3. Spears, C. E. and Phelps, W. M.: Arch. Pediat. *76*:287 (July) 1959. 4. Phelps, W. M.: Arch. Pediat. *76*:243 (June) 1959. 5. Friedman, A. P.; Frankel, K., and Fransway, R. L.: Papers presented at Scientific Meeting, New York State Society of Industrial Medicine, Inc., New York, Sept. 30, 1959. 6. Kuge, T.: Unpublished reports. 7. Ostrowski, J. P.: Ortbopedics *2*:7 (Jan.) 1960.

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1. Karnaky, K.J.: Med. Record and Annals, Houston 46:296 (Nov. 1952).

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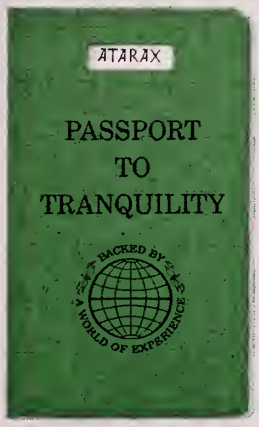
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References: 1. Kanof, N. B., and Blau, S.: *New York J. Med.* 59:2184 (June 1) 1959.
2. Smith, J. G., Jr.; Zawisza, R. J., and Blank, H.: *A.M.A. Arch. Dermat.* 78:643 (Nov.) 1958.

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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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INDEX TO ADVERTISERS

Ames Company, Inc. ... Inside Back Cover
Appalachian Hall ... 48
Ayerst Laboratories ... 79
Brayten ... 57
Bristol ... 10-11
Burroughs Wellcome Co. ... 77
Canada Dry ... 54
Ciba ... 9, 18, 66
Davies, Rose & Company, Limited ... 70
Drug Specialties ... 31-32
Dyer, David A., Insurance ... 58
Eli Lilly and Company ... 44
Endo Laboratories ... 67
Fesler ... 68-69
First & Merchants ... 70
General Electric ... 16
Gill Memorial Eye, Ear and Throat Hospital, Inc. ... 47
Geigy ... 13, 76
Glenbrook ... 74
Haskell, Charles C., & Company ... 23
Jefferson, A. G. ... 6
Johnston-Willis Hospital ... 52
Jones and Vaughan ... 7
Lederle ... 14-15, 27, 39, 60, 72-73
Lorillard ... 59
Mayrand, Inc. ... 55
Medicine in Virginia ... 52, 70
Merck Sharp & Dohme ... 5, 12, 75
Parke, Davis & Company ... Second Cover-3
People's Service Drug Stores ... 40
Physician's Products Co. ... 62
Plyler's Nursing Home, Mrs. ... 51
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital ... 47
Richmond Hotels Incorporated ... 6
Riverside Convalescent Home ... 46
Robins, A. H. Company ... 17
Roerig ... 8, 24, 71
Saint Albans ... 49
Schering ... 28-29, 43, 53, 56
Searle ... 45
Smith-Dorsey ... 34-35
Smith Kline & French Laboratories ... Back Cover
Squibb ... 42, 80
St. Elizabeth's Hospital ... 48
St. Luke's Hospital ... 51
St. Paul-Western Insurance Companies ... 78
State Board of Medical Examiners, The ... 52
Stuart Circle Hospital ... 49
Terrace Hill Nursing Home ... 46
Tucker Hospital, Inc. ... 52
United States Brewers Foundation ... 26
Vale Chemical Co. ... 30, 61
Valentine Company, Inc. ... 54
Wallace Laboratories ... 25, 33, 63-64, 65
Wesson Oil ... 36-37
White Cross Hospital ... 50
Williams Printing Co. ... 56
Winthrop Laboratories ... 19-22, 38, 41



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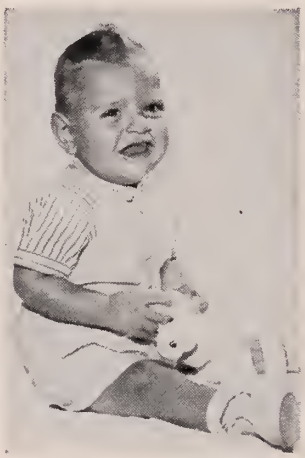
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Polydipsia	89	81.0
Weight loss	47	42.7
Polyphagia	28	25.4
Anorexia	16	14.5
Lethargy	14	12.7
Enuresis	7	6.4
Vomiting	5	4.5
Irritability	3	2.7
"Craving for sweets"	3	2.7
"Sticky diaper"	3	2.7
"Strong odor to urine"	2	1.8
Glycosuria	2	1.8
Hypoglycemia	2	1.8
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1. Goddard, E.S.: in *Trifluoperazine, Further Clinical and Laboratory Studies*, Philadelphia, Lea & Febiger, 1959.

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(expressed in terms of base)

Condition	Dosage (daily, in divided doses)	Duration of Therapy
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	Children: 50 mg/Kg; up to 100 mg/Kg in severe cases.	Up to 7 days
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	Children: 22 mg/Kg; larger doses when required.	5 days
Preoperative Suppression of Intestinal Flora	*Adults:* 2 Gm.	4 days
Hepatic Coma	*Adults:* up to 6 Gm., depending on degree of hepatic insufficiency and response of patient.	See literature

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REFERENCES: (1) Coffey, G. L., *et al.*: *Antibiotics & Chemother.* 9:730, 1959. (2) Personal Communications to the Department of Clinical Investigation, Parke, Davis & Company, 1959. (3) Godenne, G. D.: Paromomycin in diarrheas of infants and children, Antibiotics Annual 1959-1960, New York, Medical Encyclopedia Inc., in press. (4) McMath, W. F. T., & Hussain, K. K.: *Pub. Health* 73:328, 1959. (5) Courtney, K. O., & Thompson, P. E.: Paromomycin as a therapeutic substance for intestinal amebiasis and bacterial enteritis, Antibiotics Annual 1959-1960, New York, Medical Encyclopedia Inc., in press. (6) Shafei, A. Z.: *Antibiotic Med. & Clin. Therapy* 6:275, 1959. (7) Elias, F. L., & Oliver-Gonzales, J.: *Antibiotic Med. & Clin. Therapy* 6:584, 1959. (8) Carter, C. H.: *Antibiotic Med. & Clin. Therapy* 6:586, 1959. (9) Fast, B. B., *et al.*: *Arch. Int. Med.* 101:467, 1958. (10) Mackie, J. E., *et al.*: *New England J. Med.* 259:1151, 1958. (11) Stormont, J. M., *et al.*: *New England J. Med.* 259:1145, 1958.

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TABLE OF CONTENTS

GUEST EDITORIAL
This I Believe—*Lamont Pugh, M.D.* 297

ORIGINAL ARTICLES
Plant Dermatitis—*George H. Curtis, M.D.* 301
The Educational Work of Robley Dunglison, M.D.—*Chalmers L. Gemmill, M.D.* 307
The Control of Weight in Hypertensives on Rauwolfia and its Derivatives—*Harold S. Feldman, M.D.* 310
Portal Caval Shunt—*R. N. deNiord, Jr., M.D.* 314
Immuno-Pancreatitis—*Robert Edgar Mitchell, Jr., M.D., James L. A. Roth, M.D., H. L. Bockus, M.D., Merle M. Miller, M.D.* 319
The Problem of Hiatus Hernia—*William D. Poe, M.D.* 324
Aspirin Poisoning—$C_9H_8O_4$—*Sidney Kaye, Ph.D.* 330
Tobacco and Renal Function and Diseases of the Urinary Tract—*P. S. Larson, Ph.D., H. B. Haag, M.D., H. Silvette, Ph.D.* 332

PRE-PAID MEDICAL CARE
The Past Five Years 342

PUBLIC HEALTH
Control of Communicable Diseases in Man 344

MENTAL HEALTH
Psychiatric Consultation to Social Agencies 347

THE MEDICAL SOCIETY OF VIRGINIA
Council Minutes 349

MISCELLANEOUS
Mail-Order Rx Schemes 351

BOOK ANNOUNCEMENTS 353

EDITORIAL
The University of Virginia Hospital (1901-1951)—*Harry J. Warthen, M.D.* 354

SOCIETY ACTIVITIES 355

NEWS 356

OBITUARIES 357

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INDEX TO ADVERTISERS—Page 80

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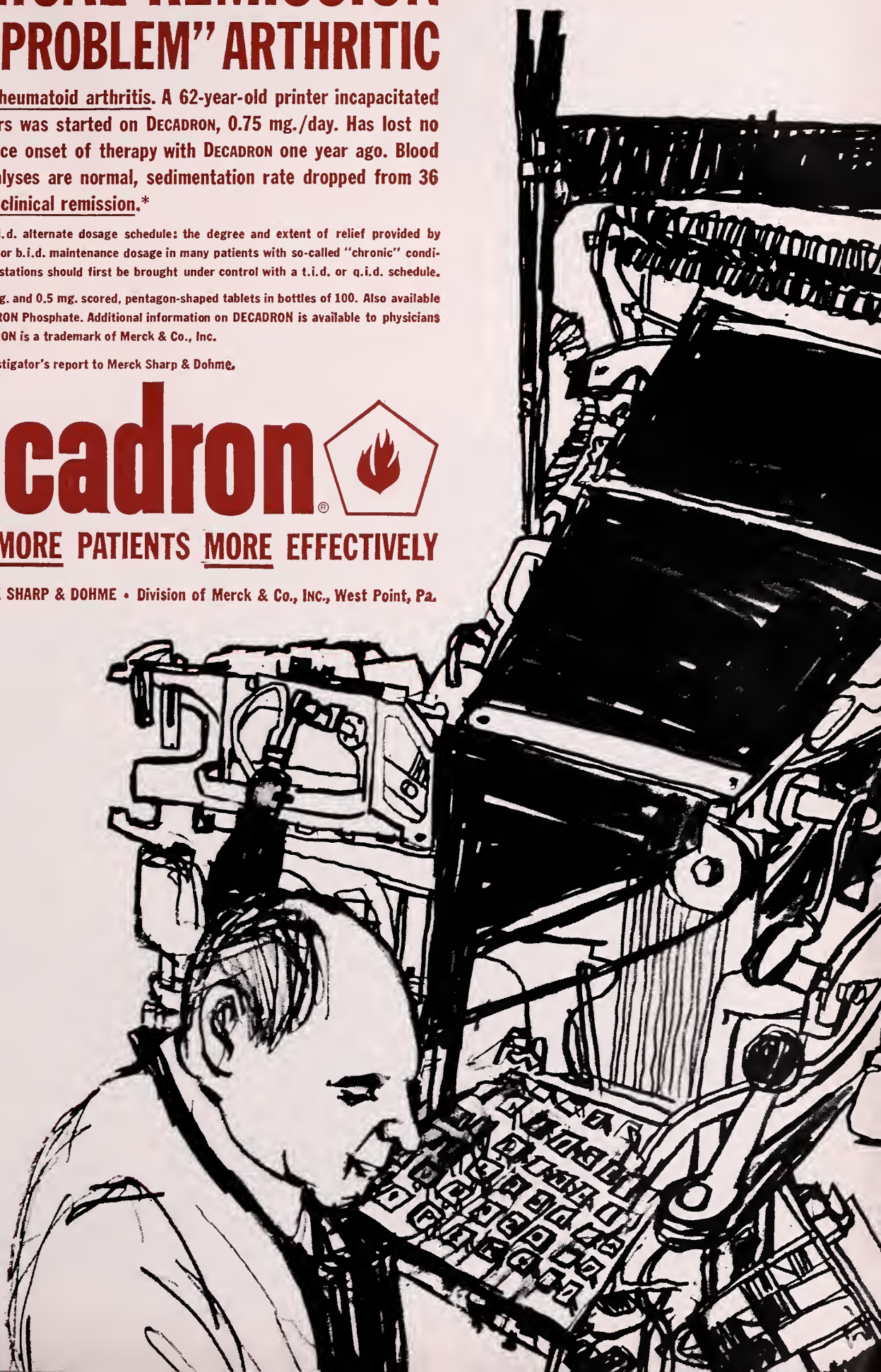
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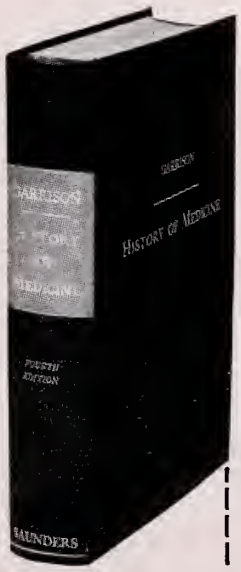
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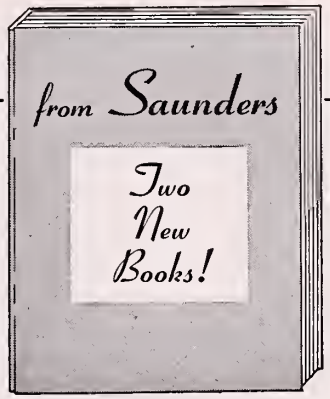
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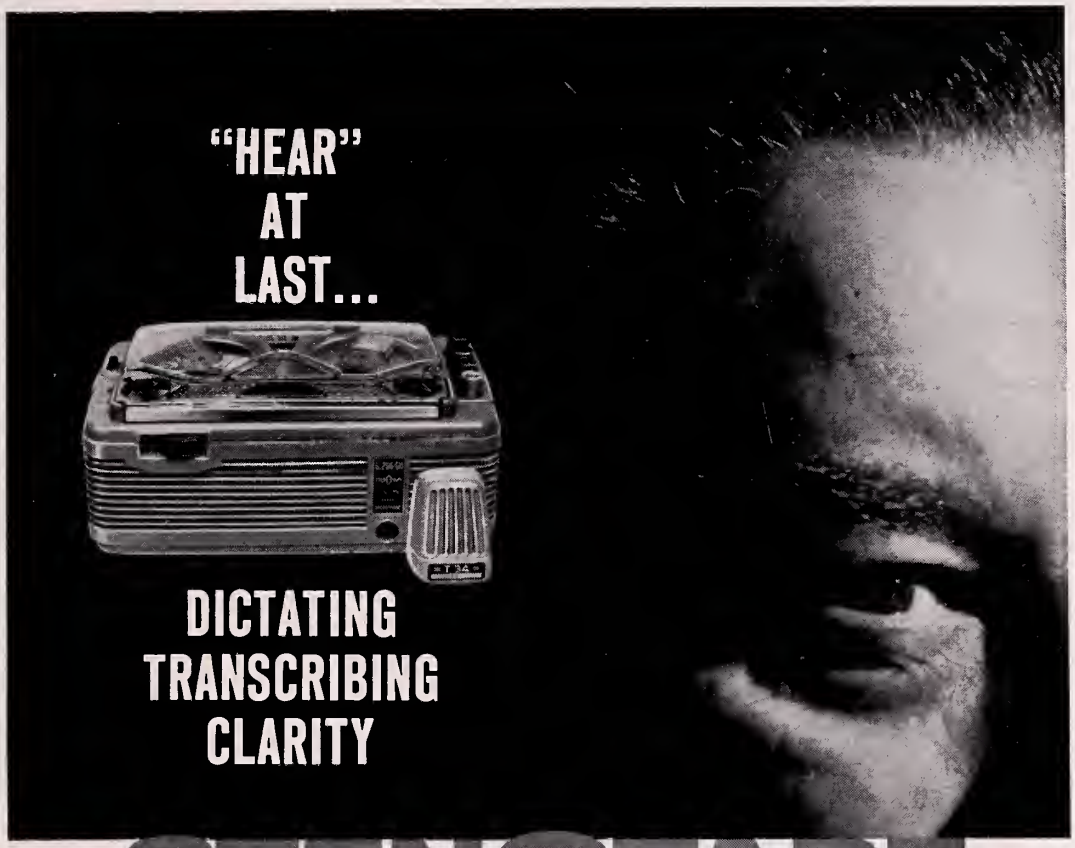
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GELOSO

offers true "professional" dictating transcribing sound and efficiency

Doctor, Lawyer, Office Chief... here is the soundest practice you can establish to end paper-work problems. LISTEN: StenOtape gives you the greatest clarity of sound in the dictating field today. This 6½ lb. compact unit, with its extremely sensitive microphone records every word perfectly within a 30 foot radius. You can actually dictate comfortably from any point in the room. Seated and relaxed, you can tape interviews with a patient or client; and because of StenOtape's unique sound-fidelity, your secretary will hear and enjoy every word of your error-free dictation. Doctors and Dentists can play their post graduate educational tapes on StenOtape and enjoy superb playback quality. At the office, home or away, StenOtape records everything up to 2 hours on one tape... phone calls, conferences, dictation, *even music!* Hear the StenOtape difference now... it's an exceptional value!

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FULL YEAR GUARANTEE — Federal Tax Included

Check These Other Major StenOtape Features:

● Accurate word-counter. ● Built-in Speaker. ● 4" high, weighs only 6½ lbs. ● Travels in handsome attache case. ● Low-cost accessories available to cover every dictating-transcribing-recording situation. ● Precision designed by Geloso, Europe's largest integrated electronics manufacturer of communication equipment. ● Sales and Service Coast to Coast.

FREE! LIFETIME SUPPLY OF MAGNETIC TAPE MAIL THIS COUPON NOW!

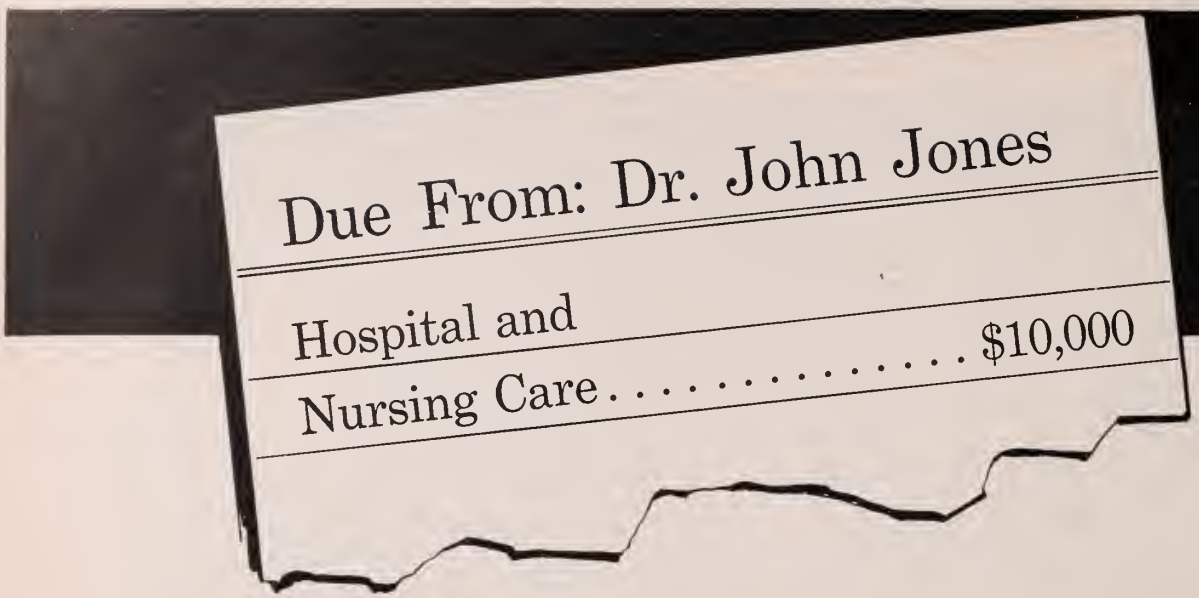
AMERICAN GELOSO ELECTRONICS, INC.
251 Park Ave. So., Dept. 92, New York 10, N. Y

Gentlemen: Please rush, without obligation, illustrated booklet "The Facts About Dictating Machines." I understand that should I decide to purchase a StenOtape this coupon entitles me to a lifetime supply (6 rolls) of reusable Magnetic Tape worth $15.00.* **Offer expires July 31, 1960*

Name_____

Address_____

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Doctor . . . What would paying a bill like this do to your personal finances?

As a doctor, you are well acquainted with today's extremely high hospital and nursing costs. Yet many physicians have done nothing to cushion the financial shock of serious illness or injury to themselves or their families.

PLAN 1. Major Hospital And Nursing

Provides coverage for you, and your wife to age 70, and dependent, unmarried children between the ages of 14 days and 23 years. Protection up to $10,000 within 3 years of accident or sickness . . . the same sum for any sickness for which payment has been made that recurs after an interval of 12 months. The plan pays 100% of room, board and all necessary charges for hospital care and treatment . . . 75% of special nurse expense in the hospital. You have a choice of 3 deductible amounts to keep your premiums within the range you prefer. Unlike most such plans, premiums *do not* increase with your age.

PLAN 2. Professional Overhead Expense

If you should be disabled by accident or illness, this plan provides an income for you. Amount of income is based on your office overhead. You receive disability income for 12 months and if disability recurs after 90 days, income is resumed for another 12 months. Both plans are underwritten by American Casualty Company of Reading, Pa.

APPROVED BY THE MEDICAL SOCIETY OF VIRGINIA

To protect its members from crippling hospital expenses, The Medical Society of Virginia is sponsoring a low-cost group insurance program for physicians only. To best suit your individual needs, 2 basic types of protection are offered (see outline of plans at left).

HAVE YOUR NURSE PHONE US COLLECT

Find out why The Medical Society of Virginia has approved these plans as the best available protection for its members. Have your nurse phone collect for full information. There is no obligation and no solicitor will call. Already hundreds of Virginia doctors have enrolled. If you, too, have been interested in these plans, but lacked the time to seriously study them, please get in touch with us today. We will gladly supply additional information or an enrollment application. *May we hear from you today?*

DAVID A. DYER, Administrator
Medical Arts Building
Roanoke, Virginia
Phone: Diamond 4-5000

PAPAIN IS THE KEY

to complete, thorough vaginal cleansing

Meta Cine®

mucolytic, acidifying, physiologic vaginal douche

The papain content of Meta Cine is the key reason why it effects such complete cleansing of the vaginal vault. Papain is a *natural* digestant, and is capable of rendering soluble from 200-300 times its weight of coagulated egg albumin. In the vagina, papain serves to dissolve mucus plugs and coagulum.

Meta Cine also contains lactose—to promote growth of desirable Doderlein bacilli—and methyl salicylate, eucalyptol, menthol and chlorothymol, to stimulate both circulation and normal protective vaginal secretions. Meta Cine's pleasant, deodorizing, *non-medicinal* fragrance will meet your patients' esthetic demands.

Supplied in 4 oz. and 8 oz. containers, and in boxes of 30 individual-dose packets. Dosage: 2 teaspoonfuls, or contents of 1 packet, in 2 quarts of warm water.



BRAYTEN

BRAYTEN PHARMACEUTICAL COMPANY *Chattanooga 9, Tennessee*

The first synthetic penicillin available for general clinical use

FOR YOUR NEXT PATIENT WHERE PENICILLIN IS INDICATED .

SYNC

PEAK BLOOD LEVELS HIGHER THAN POTASSIUM PENICILLIN V

ORAL ROUTE PROVIDES HIGHER INITIAL PEAK BLOOD LEVELS THAN INTRAMUSCULAR PENICILLIN G

IMPROVED ANTIBIOTIC ACTION FROM ISOMERIC COMPLEMENTARITY

SUPPLY: SYNCILLIN TABLETS–250 mg. and SYNCILLIN TABLETS–125 mg.
SYNCILLIN FOR ORAL SOLUTION–60 ml. bottles–when reconstituted, 125 mg. per 5 ml.
SYNCILLIN FOR PEDIATRIC DROPS–1.5 Gm. bottles. Calibrated dropper delivers 125 mg.





CONSIDER THESE 6 IMPORTANT THERAPEUTIC ATTRIBUTES OF

V-CILLIN™

potassium phenethicillin (POTASSIUM PENICILLIN-152)

ANTIBIOTIC ACTIVITY DIRECTLY PROPORTIONAL TO ORAL DOSE

REDUCED RATE OF INACTIVATION BY STAPH PENICILLINASE

SOME STAPH STRAINS MORE SENSITIVE TO SYNCILLIN IN VITRO

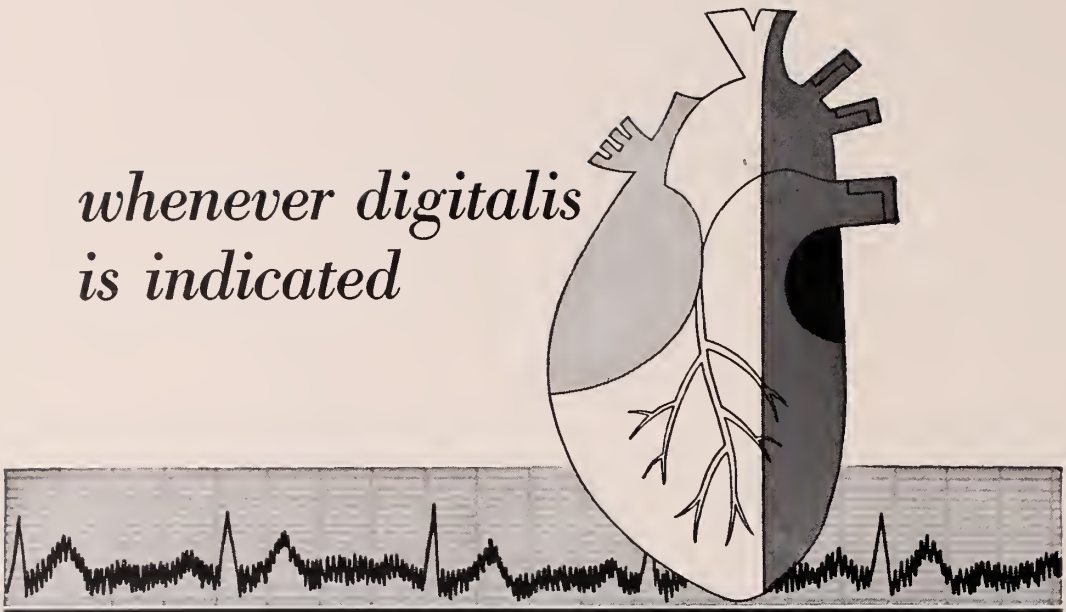
BRISTOL LABORATORIES, SYRACUSE, NEW YORK

BRISTOL





whenever digitalis is indicated



'LANOXIN'® brand DIGOXIN

formerly known as Digoxin 'B. W. & Co.'®

"If one digitalis agent were to be recommended for its adaptability to the many and varied clinical contingencies, we believe Digoxin would be the drug of choice."

Lown, B., and Levine, S. A.: Current Concepts in Digitalis Therapy, Boston, Little, Brown & Company, 1954, p. 23, par. 2.

'LANOXIN' TABLETS
0.25 mg. scored (white)
0.5 mg. scored (green)

'LANOXIN' INJECTION
0.5 mg. in 2 cc. (I.M. or I.V.)

'LANOXIN' ELIXIR PEDIATRIC
0.05 mg. in 1 cc.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Squibb Announces Chemipen

Squibb Alpha-Phenoxyethyl Penicillin Potassium

new chemically improved penicillin which provides the highest blood levels that are obtainable with oral penicillin therapy



As a pioneer and leader in penicillin therapy for more than a decade, Squibb is pleased to make Chemipen, a new chemically improved oral penicillin, available for clinical use.

With Chemipen it becomes possible as well as convenient for the physician to achieve and maintain higher blood levels—with greater speed—than those produced with comparable therapeutic doses of potassium penicillin V. In fact, Chemipen is shown to have a 2:1 superiority in producing peak blood levels over potassium penicillin V.*

Extreme solubility may contribute to the higher blood levels that are so notable with Chemipen.* Equally notable is the remarkable resistance to acid decomposition (Chemipen is stable at 37°C. at pH 2 to pH 3), which in turn makes possible the convenience of oral treatment.

And the economy for your patients will be of particular interest—Chemipen costs no more than comparable penicillin V preparations.

Dosage: Doses of 125 mg. (200,000 u.) or 250 mg. (400,000 u.), t.i.d., depending on the severity of the infection. The usual precautions must be carefully observed with Chemipen, as with all penicillins. Detailed information is available on request from the Professional Service Department.

Supply: Chemipen Tablets of 125 mg. (200,000 u.) and 250 mg. (400,000 u.), bottles of 24 tablets. Chemipen Syrup (cherry-mint flavored, nonalcoholic), 125 mg. per 5 cc., 60 cc. bottles.

*Knudsen, E. T., and Rolinson, G. N.: Lancet 2:1105 (Dec. 19) 1959.

"CHEMIPEN" IS A SQUIBB TRADEMARK.

SQUIBB

Squibb Quality—the Priceless Ingredient

Proven

in over five years of clinical use and more than 750 published clinical studies

Effective

for relief of anxiety and tension

Outstandingly Safe

- simple dosage schedule produces rapid, reliable tranquilization without unpredictable excitation
- no cumulative effects, thus no need for difficult dosage readjustments
- does not produce ataxia, change in appetite or libido
- does not produce depression, Parkinson-like symptoms, jaundice or agranulocytosis
- does not impair mental efficiency or normal behavior



when that early Monday morning telephone call is from a weekend do-it-yourselfer

"...and this morning, Doctor, my back is so stiff and sore I can hardly move."

now...there is a way to prompt, dependable relief of back distress

the pain goes while *the muscle relaxes*

POTENT — **rapid relief in acute conditions**

SAFE — **for prolonged use in chronic conditions**

notable safety — extremely low toxicity; no known contraindications; side effects are rare; drowsiness may occur, usually at higher dosages

rapid action, sustained effect — starts to act quickly, relief lasts up to 6 hours

easy to use — usual adult dosage is one 350 mg. tablet 3 times daily and at bedtime

supplied — as 350 mg., white, coated tablets, bottles of 50; *also available for pediatric use:* 250 mg., orange capsules, bottles of 50

WALLACE LABORATORIES, New Brunswick, New Jersey

SOMA™

(CARISOPRODOL WALLACE)



for **dryness** and **itching,** prickly heat and rash
intertrigo, insect bites, other summer skin discomforts

Sardo®

in the bath



1. Spoor, H. J.: N. Y. State J. Med., Oct. 15, 1958

SARDO acts promptly to help restore needed natural oil and moisture[1] to dry, itchy skin, by helping to re-establish the normal lipid-aqueous balance. Thus SARDO eases irritation, soothes, softens, brings sustained comfort.

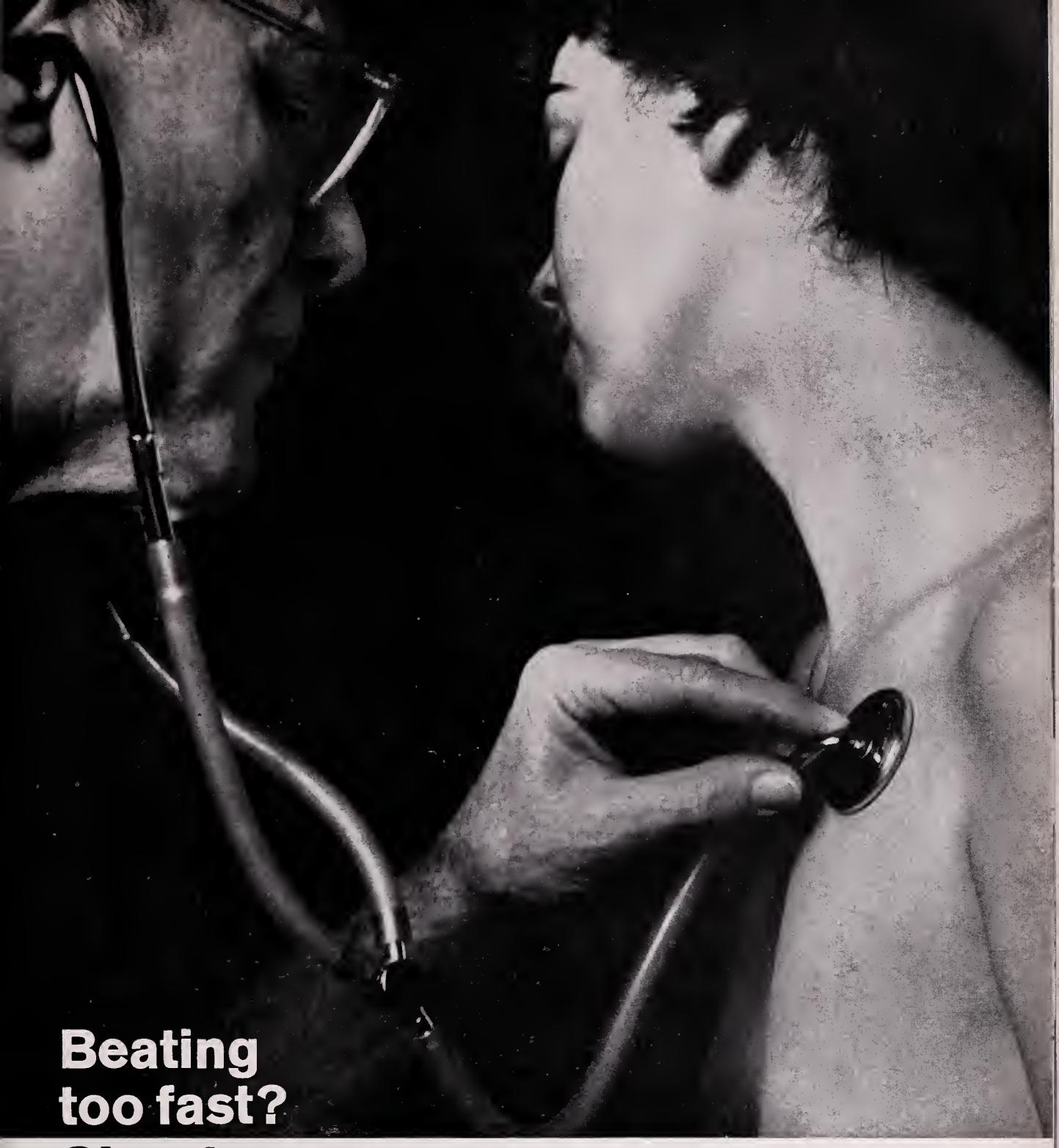
USED IN THE BATH, SARDO releases millions of microfine water-dispersible globules* to provide an emollient suspension which enhances your other therapy . . . in prickly heat, intertrigo, insect bites, skin dryness and itch of atopic dermatitis, eczematoid dermatitis, senile pruritus, soap dermatitis, etc.[1]

Patients appreciate pleasant, convenient, easy-to-use SARDO. Non-sensitizing. Most economical. Bottles of 4, 8 and 16 oz.

Write for *Samples* and literature . . .

Sardeau, Inc. 75 East 55th Street New York 22, New York

© 1959 *Patent Pending, T. M.



Beating too fast? Slow it down with SERPASIL®

(reserpine CIBA)

Serpasil has proved effective as a heart-slowing agent in the following conditions: mitral disease; myocardial infarction; cardiac arrhythmias; neurocirculatory asthenia; thyroid toxicosis; excitement and effort syndromes; cardiac neurosis; congestive failure. Serpasil should be used with caution in patients receiving digitalis and quinidine. It is not indicated in cases of aortic insufficiency.

SUPPLIED: Tablets, 0.1 mg., 0.25 mg. (scored) and 1 mg. (scored). Complete information available on request.

CIBA

SUMMIT • NEW JERSEY

2/2819MB

control the tension—treat the trauma



...Pathibamate® 400 200

meprobamate with PATHILON® tridihexethyl chloride Lederle

greater flexibility in the control of tension, hypermotility and excessive secretion in gastrointestinal dysfunctions

PATHIBAMATE combines two highly effective and well-tolerated therapeutic agents:

meprobamate (400 mg. or 200 mg.) widely accepted tranquilizer and...
PATHILON (25 mg.)—anticholinergic noted for its peripheral, atropine-like action, with few side effects.

The clinical advantages of PATHIBAMATE have been confirmed by nearly two years' experience in the treatment of duodenal ulcer; gastric ulcer; intestinal colic; spastic and irritable colon; ileitis; esophageal spasm; anxiety neurosis with gastrointestinal symptoms and gastric hypermotility.

Two dosage strengths—PATHIBAMATE-400 and PATHIBAMATE-200 facilitate individualization of treatment in respect to both the degree of tension and associated G.I. sequelae, as well as the response of different patients to the component drugs.

Supplied: **PATHIBAMATE-400**—Each tablet (yellow, 1/2-scored) contains meprobamate, 400 mg.; PATHILON tridihexethyl chloride, 25 mg.
PATHIBAMATE-200—Each tablet (yellow, coated) contains meprobamate, 200 mg.; PATHILON tridihexethyl chloride, 25 mg.

Administration and Dosage: **PATHIBAMATE-400**—1 tablet three times a day at mealtime and 2 tablets at bedtime.
PATHIBAMATE-200—1 or 2 tablets three times a day at mealtime and 2 tablets at bedtime.
Adjust to patient response.

Contraindications: glaucoma; pyloric obstruction, and obstruction of the urinary bladder neck.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Roerig Announces...

THE ORALLY MAXIMAL PENICILLIN

MAXIPEN®

α-phenoxyethyl penicillin potassium

THE ORALLY MAXIMAL PENICILLIN

Maximal Absorption

Acid stable, highly soluble

Maximal Blood Levels

Maximal Flexibility

May be administered without regard to meals. However, highest absorption is achieved when taken just before or between meals.

Maximal Oral Indications

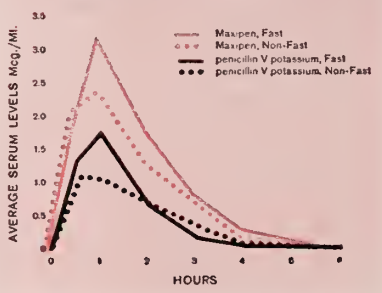
Indicated in infections caused by streptococci, pneumococci, susceptible staphylococci, and gonococci

DOSAGE: For moderately severe conditions, 125 to 250 mg. three times daily. For more severe conditions, 500 mg. as often as every four hours around the clock.

NOTE: To date, MAXIPEN has not shown less allergic reactions than older oral penicillins. Usual precautions regarding penicillin administration should be observed.

SUPPLIED: MAXIPEN TABLETS, scored, 125 mg. (200,000 units), bottles of 36; 250 mg. (400,000 units), bottles of 24 and 100 tablets. MAXIPEN FOR ORAL SOLUTION; reconstituted each 5 cc. contains 125 mg. (200,000 units), in 60 cc. bottles.

COMPARATIVE ORAL SERUM LEVELS*
Fasting and Non-Fasting States / 250 Mg. Dose

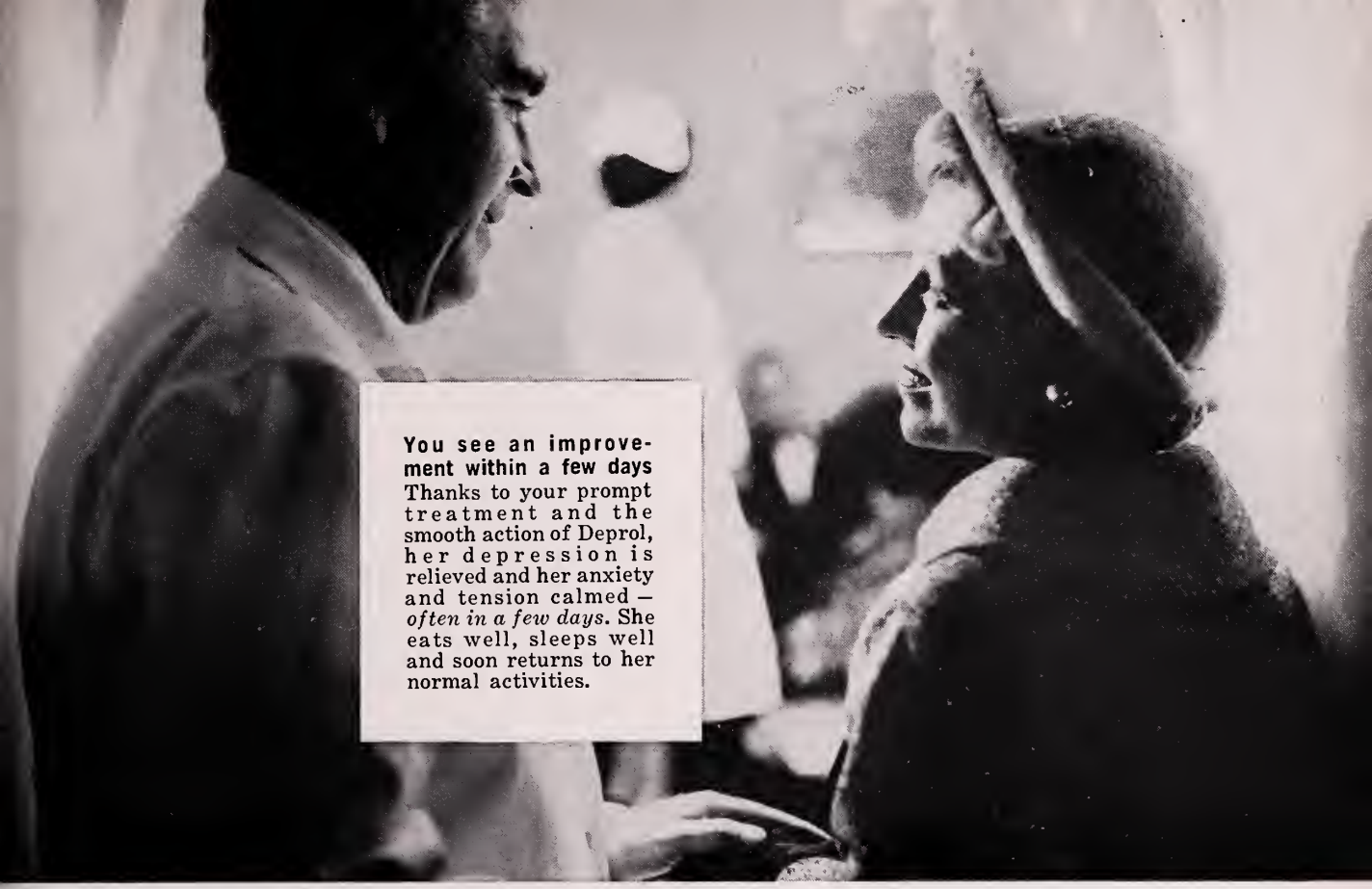


*Based on 3294 individual serum antibiotic determinations. Complete details available on request.

MAXIPEN, the orally maximal penicillin, is a triumph of man over molecule; a product of Pfizer Research

ROERIG Rx

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being



Lifts depression...as it calms anxiety!

Smooth, balanced action lifts depression as it calms anxiety...rapidly and safely

Balances the mood – no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient – *they often aggravate anxiety and tension.*

And although amphetamine-barbiturate combinations may counteract excessive stimulation – *they often deepen depression.*

In contrast to such "seesaw" effects, Deprol's smooth, *balanced* action lifts depression as it calms anxiety – both at the same time.

Acts swiftly – the patient often feels better, sleeps better, within a few days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly – often within a few days. Thus, the expense to the patient of long-term drug therapy can be avoided.

Acts safely – no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function – frequently reported with other antidepressant drugs.

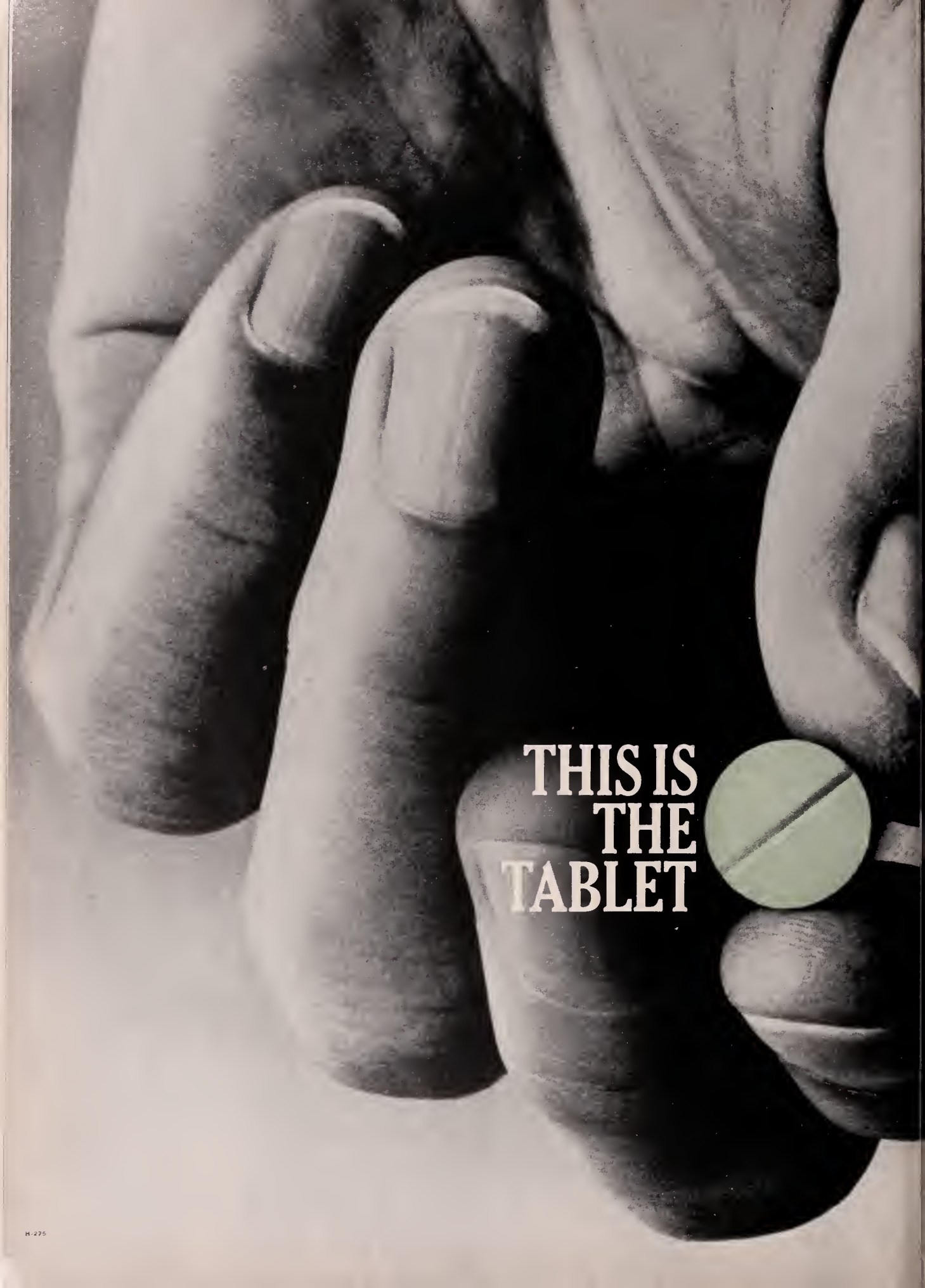
Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate. **Supplied:** Bottles of 50 light-pink, scored tablets. Write for literature and samples.

▲Deprol▲®

WALLACE LABORATORIES/*New Brunswick, N. J.*

CD-2175



H-275



ALPEN is the oral penicillin that provides on a fasting stomach peak antibiotic blood levels approximately twice as high as oral potassium penicillin V... and significantly higher than I. M. penicillin G.

Some strains of staphylococci resistant to other penicillins exhibit in vitro sensitivity to potassium phenethicillin.

ALPEN has greater freedom from the G. I. sequelae (overgrowth of resistant flora) sometimes observed with broad spectrum -mycins.

ALPEN gives much higher antibiotic levels within the first hour of ingestion by the well-tolerated oral route.

WHEN TO USE ALPEN Recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci.

HOW TO USE ALPEN Depending on the severity of the infection, 125 mg. (200,000 units) or 250 mg. (400,000 units) three times daily may be used. In more severe or stubborn infections, a dosage of 500 mg. (800,000 units) t.i.d. may be employed. In beta hemolytic streptococcal infections, treatment should be continued for at least ten days.

PRECAUTIONS The usual precautions in the administration of oral penicillin should be observed. For further details see package literature.

Tablets: 125 mg. and 250 mg., bottles of 25 and 100. Powder for Oral Solution (lemon-lime flavored), 1.5 Gm. bottle (125 mg. per 5 cc. teaspoonful).

this is the tablet that gives higher peak antibiotic blood levels

HIGHER THAN I. M. PENICILLIN G
HIGHER THAN POTASSIUM PENICILLIN V

ALPEN

ALPEN™—potassium phenethicillin

Schering

for adults and children

Prompt 4 way check of diarrhea



- Curbs excessive peristalsis
- Adsorbs toxins and gases
- Soothes inflamed mucosa
- Provides intestinal antisepsis

POMALIN

TRADEMARK

Liquid

EFFECTIVE ANTIDIARRHEAL

FORMULA: *Each 15 cc. (tablespoon) contains:*

Sulfaguanidine	2 Gm.
Pectin	225 mg.
Kaolin	3 Gm.
Opium tincture	0.08 cc.
(equivalent to 2 cc. paregoric)	

DOSAGE: Adults: Initially 1 or 2 tablespoons from four to six times daily, or 1 or 2 teaspoons after each loose bowel movement; reduce dosage as diarrhea subsides.

Children: ½ teaspoon (=2.5 cc.) per 15 lb. of body weight every four hours day and night until stools are reduced to five daily, then every eight hours for three days.

SUPPLIED: *Bottles of 16 fl. oz. (raspberry flavor, pink color)*
Exempt Narcotic. Available on Prescription Only.

Winthrop LABORATORIES
New York 18, N. Y.



the right combination



. . . safe, effective antihypertensive therapy

Rauprote

(Rauwolfia serpentina and Protoveratrines A and B combined)

Rauprote combines two effective antihypertensive agents—*Rauwolfia serpentina* for moderate tranquillizing and gentle hypotensive effect, and Protoveratrines A and B for faster, more potent lowering of blood pressure and bradycrotic action. The combination produces a therapeutic hypotensive effect which is superior to larger doses of either drug alone; reduced dosage of both components minimizes or eliminates toxic side effects completely.[1,2]

Clinical studies show the majority of patients suffering from significant elevation of blood pressure achieve an excellent response to this combination.[2]

Rauprote is indicated in management of moderate to severe essential hypertension.

Supplied:

In bottles of 100 and 1,000 tablets, each tablet containing 50 mg. *Rauwolfia serpentina* and 0.2 mg. Protoveratrines A and B (alkaloids of *Veratrum album*).

1. Goodman, L.S. and Gilman, A.: The Pharmacological Basis of Therapeutics, 2nd Ed., Macmillan & Co., New York (1955).

2. Roberts, E.: Four Year Evaluation of an Antihypertensive Agent, J. Am. Med. Women's Assn. *13*:349 (1958).

THE VALE CHEMICAL CO., INC.

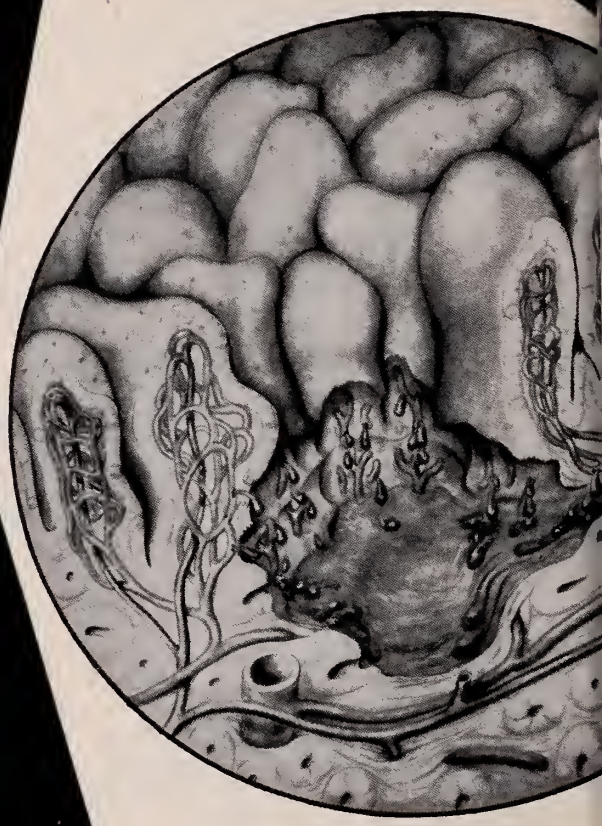
VALE

Pharmaceuticals since 1922

Allentown, Pennsylvania

strengthens
fragile capillaries

in internal bleeding



capillary hemorrhage
in duodenal ulcer

. . . associated with abnormal capillary permeability and fragility in

peptic ulcer

ulcerative colitis

chronic nosebleed

purpura
(nonthrombocytopenic)

hemorrhagic cystitis

ecchymoses

menorrhagia

habitual and threatened abortion



CVP®

C.V.P. helps diminish increased capillary permeability, fragility, and resultant bleeding by acting to maintain the integrity of the intercellular ground substance (cement) of capillary walls. C.V.P. is the original and exclusive water-soluble citrus bioflavonoid complex. Readily absorbed and utilized, C.V.P. is relatively free (due to special processing) of hesperidin, naringin and other comparatively insoluble and inactive flavonoids found in citrus.

Each capsule or teaspoonful (approx. 5 cc.) of syrup provides:

CITRUS BIOFLAVONOID COMPOUND . . . . 100 mg.

ASCORBIC ACID (vitamin C) . . . . . 100 mg.

Bottles of 100, 500 and 1000 capsules; 4 oz., 16 oz. and gallon syrup

samples (capsules or syrup) and literature from . . .

u. s. vitamin corporation • PHARMACEUTICALS

(Arlington-Funk Laboratories, division) • 250 East 43rd Street, New York 17, N. Y.

now–for more comprehensive control of

'pain & spasm'



INDICATIONS

HEAD: temporomandibular muscle spasm • NECK: acute torticollis, osteoarthritis of cervical spine with spasm of cervical muscles, whiplash injury • TRUNK AND CHEST: costochondritis, intercostal myositis, xiphodynia • BACK: acute and chronic lumbar strains and sprains, acute low back pain (unspecified), acute lumbar arthritis and traumatic injury, compression fracture, herniated intervertebral disc, post-disc syndrome, strained muscle(s) • EXTREMITIES: acute hip injury with muscle spasm, ankle sprain, arthritis (as of foot or knee), blow to skin followed by muscle spasm, bursitis, spasm or strain of muscle or muscle group, old fracture with recurrent spasm, Pellegrini-Stieda disease, tenosynovitis with associated pain and spasm.

-pain due to or associated with -spasm of skeletal muscle

a new muscle relaxant-analgesic

Robaxisal®

ROBAXIN® WITH ASPIRIN

Many conditions, painful in themselves, often give rise to spasm of skeletal muscles. ROBAXISAL, the new dual-acting muscle relaxant-analgesic, treats both the pain and the spasm with marked success: In clinical studies on 311 patients, 12 investigators[1] reported satisfactory results in 86.5%. Each ROBAXISAL Tablet contains:

- A relaxant component — Robaxin*— widely recognized for its prompt, long-lasting relief of painful skeletal muscle spasm, with unusual freedom from undesired side effects ..... 400 mg

*Methocarbamol Robins U S Pat No 2770649

- An analgesic component — aspirin — whose pain relieving effect is markedly enhanced by Robaxin, and which has added value as an anti-inflammatory and anti-rheumatic agent ..... (5 gr.) 325 mg.

INDICATIONS: ROBAXISAL is indicated when analgesic as well as relaxant action is desired in the treatment of skeletal muscle spasm and severe concurrent pain. Typical conditions are disorders of the back, whiplash and other traumatic injuries, myositis, and pain and spasm associated with arthritis.

SUPPLY: ROBAXISAL Tablets (pink-and-white, laminated) in bottles of 100 and 500.

Also available: ROBAXIN Injectable, 1.0 Gm. in 10-cc. ampul. ROBAXIN Tablets, 0.5 Gm. (white, scored) in bottles of 50 and 500.

[1]Clinical reports in files of A. H. Robins Co., Inc., from J. Allen, Madison, Wisc., B. Billow, New York, N. Y., B. Decker, Richmond, Va., C. Freeman, Jr., Augusta, Ga., R. B. Gordon, New York, N. Y., J. E. Holmblad, Schenectady, N. Y., L. Levy, New York, N. Y., N. LoBue, Chicago Heights, Ill., H. Nachman, Richmond, Va., A. Poindexter, Los Angeles, Cal., E. Rogers, Brooklyn, N. Y., K. H. Strong, Fairfield, Ia.

Additional information available upon request.

A. H. ROBINS CO., INC., Richmond 20, Virginia

Making today's medicines with integrity . . . seeking tomorrow's with persistence

ANOTHER YEAR OF SYMPOSIA . . .

Recognizing that the exchange of ideas is fundamental to medical progress, Lederle continues its Symposium program with the 9th year of scheduled meetings. Through these Symposia, sponsored by medical organizations with our cooperation, over 50,000 physicians have had the opportunity to hear and question authorities on important advances in clinical medicine and surgery. You have a standing invitation to attend any of these Symposia with your wife, for whom a special program is planned.



ANCHORAGE, ALASKA
Saturday, June 11, 1960
The Westward Hotel

WEST POINT, NEW YORK
Thursday, Friday, Saturday,
June 16, 17, and 18, 1960
United States Thayer Hotel

***MADISON, WISCONSIN**
Thursday, June 23, 1960
The Holiday Inn

***SPRINGFIELD, MISSOURI**
Sunday, June 26, 1960
The Holiday Inn

***ROANOKE, VIRGINIA**
Saturday, July 16, 1960
The Hotel Roanoke

***SANTA ROSA, CALIFORNIA**
Friday, September 16, 1960
The Flamingo Hotel

***KANSAS CITY, KANSAS**
Friday, September 23, 1960
Battenfeld Memorial
Auditorium

HOUSTON, TEXAS
Saturday, September 24, 1960
The Shamrock Hilton Hotel

DEFIANCE, OHIO
Wed., September 28, 1960
Defiance College

PHILADELPHIA, PENN.
Sunday, October 16, 1960
The Sheraton Hotel

***HARTFORD, CONNECTICUT**
Thursday, October 20, 1960
The Statler Hotel

***GREAT FALLS, MONTANA**
Saturday, October 22, 1960
The Rainbow Hotel

ROCHESTER, NEW YORK
Wednesday, October 26, 1960
The Manger Hotel

CHARLESTON, WEST VIRGINIA
Sunday, October 30, 1960
The Daniel Boone Hotel

SIOUX FALLS, SOUTH DAKOTA
Tuesday, November 1, 1960
The Sheraton-Cataract Hotel

***CHARLOTTE, N. CAROLINA**
Thursday, November 3, 1960
The Hotel Charlotte

***CLEVELAND, OHIO**
Wednesday, November 9, 1960
Pick Carter Hotel

***SOUTH BEND, INDIANA**
Friday, November 18, 1960
The Pick-Oliver Hotel

WESTCHESTER COUNTY, N. Y.
Wednesday November 30, 1960
Westchester Country Club

ST. PETERSBURG, FLORIDA
Saturday, December 3, 1960
Tides Hotel and Bath Club

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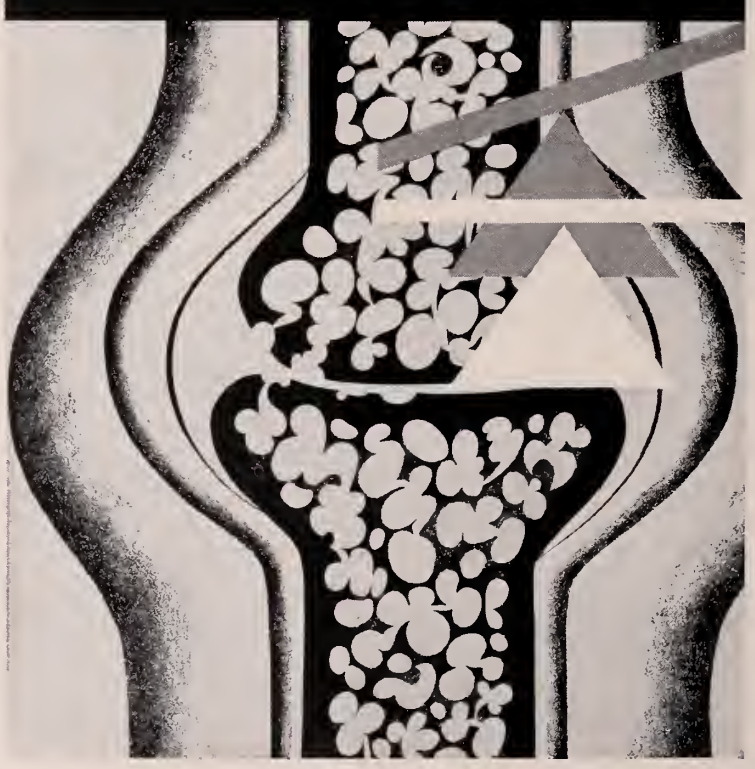
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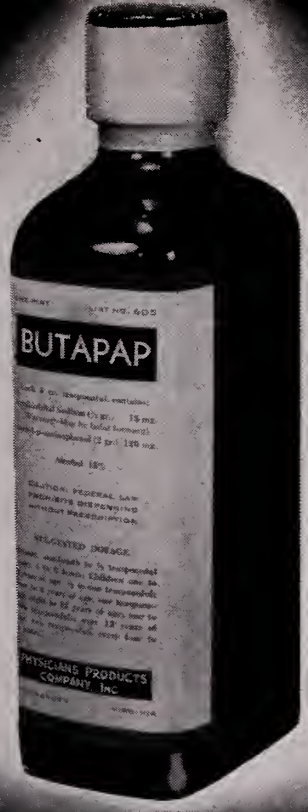
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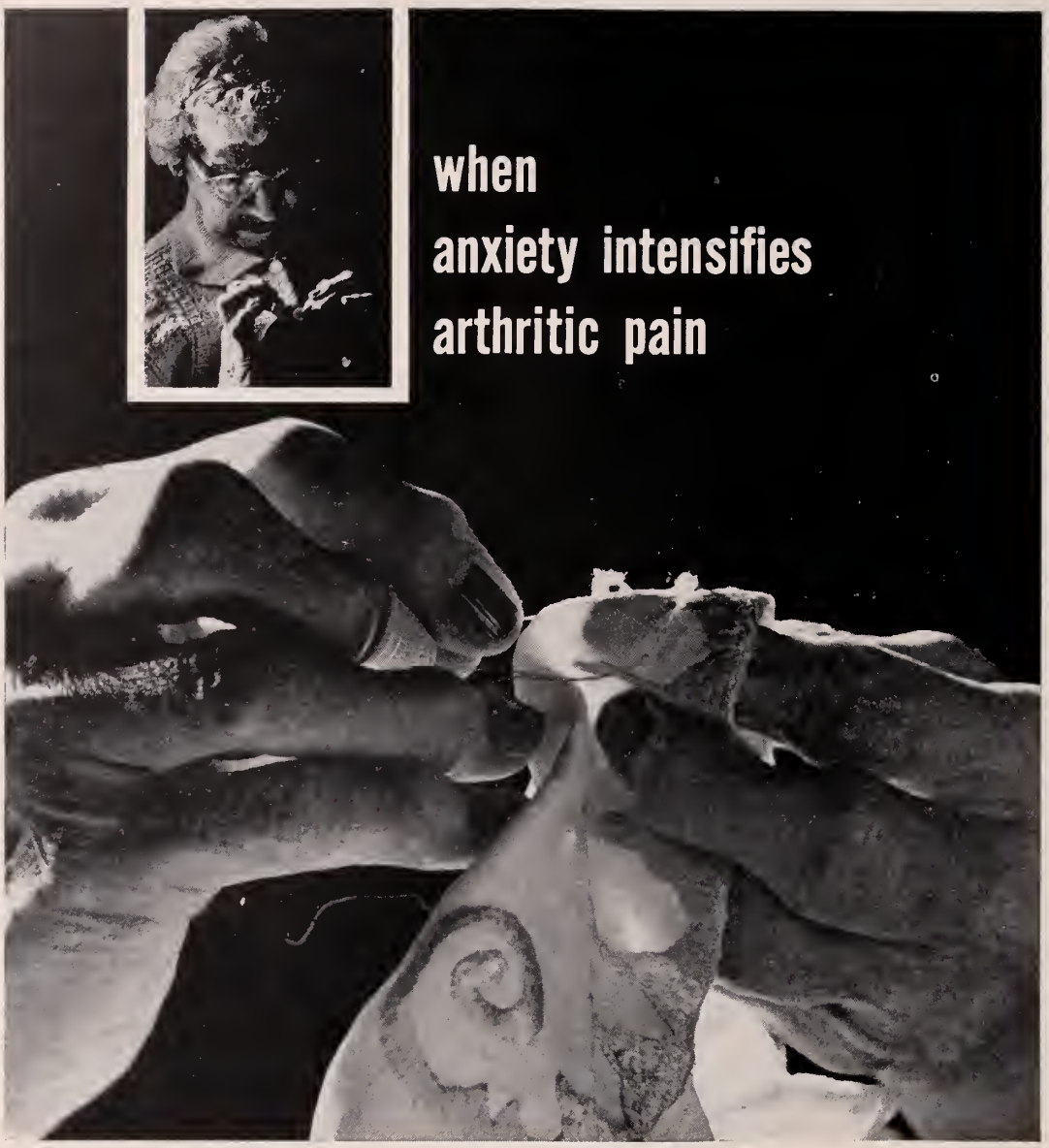
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The Virginia
MEDICAL
MONTHLY

June, 1960
Vol. 87, No. 6
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Guest Editorial . . . .

This I Believe

DR. JOHN CHALMERS DACOSTA used to caution older doctors on their way down the ladder not to interfere with the progress of younger members of the profession on their way up.

Mindful as I am of the meaningfulness of his admonition in that regard and possessed of an aversion to cluttering up the fresh air and sunshine of today with possibly musty ideas of yesteryear, it is in the face of considerable trepidation that I accept an invitation to write a guest editorial for the Virginia Medical Monthly.

In any event I was honored and flattered to have been considered worthy of such recognition as is inherent in Dr. Warthen's invitation.

In "Tom Jones," Henry Fielding observed that one who presumed to write should provide his potential readers with a declaration, in advance, of what he intended to record, similarly as a proprietor of a public eating place provides a bill of fare for his prospective customers. Having thus been notified the reader, like the customer, is free to either take or leave the offering.

It occurs to me that one who has been exposed to the various facets or disciplines of the practice of medicine for in excess of 40 years (if the time spent in medical school is counted) must inevitably be left with certain rather definite impressions. I believe I am so imbued and in compliance with the doctrine of Mr. Fielding I shall simply state it is my intention to set forth, in a manner that may be somewhat hodgepodge—but not purposely so—some tenets born of experience, some views that have appeared to become fixed with time and some convictions that have been engendered by my observations along the way. These comments will relate (a) to matters of a strictly clinical nature and (b) to the current status and needs of medicine as a profession. In fewer words; the bearing is initially clinical and then administrative.

Therefore, to the end that the element of orderliness in arrangement may not be completely disregarded, starting in the region of the head and proceeding caudalward: I believe that tonsils are provided for a definite physiological purpose, that of watchmen, so to speak, at the gateway to two important systems, the respiratory and the digestive, and their removal, for no reason other than their presence, is wrong. In substantiation of this view I would cite the relatively greater predisposition towards cervical adenopathy—in association with acute colds—on the part of those without tonsils in contrast to those with tonsils.

I believe there is a correlation between acute tonsillitis and acute appendicitis. Time and space will not permit me to elaborate upon my reasons for thinking thus and so. Suffice it, in any event, to say that during a three year tour of duty at the hospital of the U. S. Naval Academy at Annapolis, I had occasion to observe many Midshipmen

during epidemics of acute respiratory infections, and it was conspicuously notable that among this group (all of approximately the same age, of the same sex, and following the same routine with respect to diet, sleeping and exercise) with each rise in the incidence of acute tonsillitis, acute appendicitis also rose in a corresponding degree. It, at the same time, seems strikingly odd, however, that the two conditions existing concurrently in the same individual were not observed in a single instance.

I believe the manner of dress, particularly the protection of the upper chest and throat is important in the prevention of acute colds. At San Diego, California, the Naval Training Station and that of the U.S. Marine Corps are on adjacent compounds. Here again the ages of the recruits in the two service branches and their routines of training and of living were quite similar. Nevertheless, the hospital admission rate for Navy recruits with acute upper respiratory infections was from 50 to 75% higher than among Marine recruits. The major difference between the two groups was that the sailors wore jumpers open at the neck while the Marines wore shirts with buttoned up collars.

I believe that meningococcic meningitis is not contagious. In a careful and prolonged survey at the U.S. Naval Training Station, Great Lakes, Illinois, it was established that there was no space or proximity relationship between the numerous cases of spinal meningitis that developed in the barracks. Neither was there a relationship between those who showed positive meningococcus cultures from their naso-pharynges and those who subsequently developed meningitis. The incidence of meningitis among those who had previously shown positive cultures was no higher than among those with previously negative cultures.

I believe that cancer of the stomach, once it has become well enough defined to be macroscopically recognizable as such in the gross resected specimen, is about as hopeless of cure by any means as is a malignant melanoma. In my experience, all patients upon whom a diagnosis of cancer of the stomach had been correctly made preoperatively, no matter how early, and all of those in whom the existence of cancer was obvious at the time of operation, ultimately died of cancer, regardless of the extent to which surgery was carried, i.e., whether partial or total gastrectomy.

I believe peptic ulcer is a local manifestation of a systemic disease and that, as yet, no satisfactory explanation has been advanced for the occurrence of an open lesion per se any more than a plausible explanation has been offered for the formation of aphthous ulcers of the mouth, "fever blisters" on the lips or as to why a skin rash of one exanthematous disease shows a distribution and configuration characteristic of that disease while another is characterized by a rash of a different pattern.

I was taught in medical school—and for a long time was a devotee to the doctrine—that a perforated peptic ulcer was a surgical emergency of the first magnitude, and that unless closed by suture the patient would inevitably die. There was a time lapse schedule between perforation and closure according to which the prognosis was good, guarded, bad, grave or hopeless. I believe the validity of that teaching is subject to definite qualification. Undoubtedly many—in fact the majority—of perforations of gastric or duodenal ulcers will lead to a fatality in the absence of surgical intervention. On the other hand, it is not at all uncommon for smaller perforations to close spontaneously. I have seen an appreciable number of classical examples of perforated peptic ulcer with all of the pathognomonic signs, including gas beneath the diaphragm revealed by x-ray, a board like rigidity over the epigastrium etc., in which, upon exposing the gastro-duodenal area, it was necessary to peel away a tab of omentum and scrape off a well defined layer of plastic exudate in order to find the perforation. How to determine which perforations have sealed over or will do so, and which will remain open and produce a fatal peritonitis unless closed surgically, poses a question too delicate to quibble over. In other than an exceptional case now and

then, when, for well advised reasons, the surgeon may be reasonably certain the perforation has sealed itself off, surgical intervention is of course eminently justified—indeed imperative.

I believe surgical intervention for the removal from the stomach or intestines of any foreign body that has been swallowed by an individual—and I have particularly in mind open safety pins swallowed by children—is generally unnecessary. It has been my experience that most foreign bodies—and open safety pins have been *no* exception—will pass through the intestine with surprising ease and promptness. Hair swallowed by the insane is an exception.

I believe perforations of the intestine as a result of water blast (a condition to which Navy doctors—particularly those who served in the Pacific during World War II—are no strangers) are due to sudden compression of the submerged part and the physical principal of brissance and never to water being forced into the bowel through the victim's rectum.

I believe that by and large technically the poorest surgery which has for long been done has been rectal surgery. I believe any surgeon who is unwilling or unable to attend personally to the post operative dressings of rectal cases—especially the post operative care of fistulas—shouldn't do rectal surgery. Closely allied with rectal surgery have been the various surgical maneuvers designed for the removal of pilonidal cysts. I believe the surgical removal of a pilonidal cyst that has never been acutely involved but simply because it is there is ill advised. In the armed services and specifically at the Naval Academy, more sick days have been compiled as a result of failure to obtain first intention healing following excision of pilonidal cysts than from any other surgical procedure. This is no preeminently preferable type of operation for removal of a pilonidal cyst. All seasoned surgeons know that the multiplicity of methods recommended is in itself an attestation that no known method is ideal.

I believe that the gas responsible for gaseous distention of the abdomen in the presence of intestinal obstruction is generated within the viscus and is not to any significant extent accountable for in terms of swallowed air.

I believe that the failure of kidney function following crushing injuries is no different from the failure of kidney function under any shock producing set of circumstances. I believe the attempt to ascribe kidney failure to some element peculiar to crushing injuries in a large series of cases reported upon in London incident to the bombing raids early in World War II was in a large measure a misfire. There may be such a thing as the blockage of kidney tubules by hematin crystals or some other substance liberated by crushed muscle tissue, as the experts have tried to establish. I nevertheless believe that the kidney's tolerance of a reduced oxygen supply is very delicate and that when, by reason of a marked drop in blood pressure, which is both a cardinal cause and an effect of shock (whatever the circumstances under which it occurs, whether from a crushing wound, a gunshot wound or indeed as a result of surgery in the operating room) the oxygen supply to the kidney is reduced beyond a critical level and remains below that level beyond a critical time interval the kidney will cease to function. And whenever such a set of circumstances is responsible for that cessation it can never again be made to resume its function any more than a brain that has been deprived of oxygen beyond a critical time can be made to recover its function. I believe that kidney failure associated with injury or operation can, in the main, be explained in terms that simple, and an attempt to formulate an explanation involving some specific substance or bizarre set of principles is pointless.

While I am confident that never has so excellent a brand of medicine or surgery been available to the citizenry of this nation as at present, I believe all is far from well in the house of medicine at this time. For those who are interested in the implications of this comment—and all members of the profession of medicine should be

interested—I would invite their attention to a report entitled, "Physicians for a growing America," submitted last October by a Consultant Group on Medical Education appointed by the Surgeon General of the U. S. Public Health Service. Many of the facts brought to the fore in that report are astounding and certainly should be the concern not only of the standard bearers of medicine but of the public at large.

More definitively than the broad recommendations of the consultant group in point, I believe the following concepts should be immediately implemented:

(1) Streamline the formal course of medical education by eliminating non-essentials during the first half and point towards the specialization of the student's choice during the second half of the standard four year course in medical school.

(2) Establish a more liberal policy with respect to academic grades as a requisite for admission to medical schools. It is the aptness of a student after, rather than before, he enters upon the study of medicine that determines his competence as a doctor. Some individuals like plants bloom and bear earlier than others.

(3) Insure the availability of an adequate number of physicians to meet the needs of the armed services by the provision of an independent system of supply. The source of supply, i.e. the nation's medical schools, should be the same for both civilian and service needs. The capacities of the already existing medical schools should, through government subsidy, be increased and new schools established to meet these needs. This, I believe, should have been done a decade ago when it became obvious that the supply of physicians in America was inadequate and the likelihood of appreciable improvement by any means short of government control appeared dismal indeed.

(4) I have for long believed that military medicine was sufficiently unique in its requirements, sufficiently distinct in its mission and sufficiently meritorious through its achievements to warrant being considered a specialty sui generis, and being accorded such recognition as would be inherent in its own specialty board. This concept, I believe, has never been more bona fide than today.

(5) Bring the cost of medical care within ready reach of all of the people all of the time.

(6) Give medical research the fairest wind and the most careful and able navigation it is possible to provide. The wind and the waves are always on the side of the ablest navigators.

That the measure of the world is man has for long been recognized as a truism—but a truism in only a limited sense, to be sure. By a similar token the measure of the universe may also be said to be man—in-so-far as man personally, is able or will ever become able, to explore it. That the answer to the somewhat trite question: "Where do we go from here?" lies and will continue to lie within the province of medicine can scarcely be denied. How far and how fast man will be able to travel into space and return to earth intact must depend upon the capabilities of astronautical medical research to come to terms with the forces of nature and extraterrestrial environment. This I believe currently constitutes medicine's most formidable, but not necessarily its most important challenge.

Of greater immediate importance than flying into space, I believe, is a recognition of the demands of the times here at home—the demands of what we have to admit is progress and it devolves upon the leadership of what we are accustomed to regard as organized medicine in America to come to terms with these demands—to get into step with history that is in the making for there is only one alternative and that is to be run over by it.

LAMONT PUGH, M.D.

3579 South Stafford Street
Arlington 6, Virginia

EDITOR'S NOTE: Dr. Pugh entered the Medical Corps of the U. S. Navy upon graduation from the University of Virginia in 1923 and recently retired after serving over 33 years. From 1951-1955 he was the Surgeon General in the Navy.

Plant Dermatitis

GEORGE H. CURTIS, M.D.
Cleveland, Ohio

Although plant dermatitis is frequently seen, it continues to be difficult to prevent and troublesome to treat. This paper discusses the offending plants, the treatment of the dermatitis, and the prevention of the disease.

IN FOLLOWING THE LITERATURE I have concluded that of all the sources of allergic contact dermatitis the plant kingdom provides most of the causes. In this paper some of the most common allergens, management of plant dermatitis, and hyposensitization are discussed. For practical purposes, the allergens producing dermatitis venenata may be divided into three principal groups: poison ivy and other members of the family Anacardiaceae, a heterogeneous group of plants, and pollens.

Poison ivy is the most important single cause of contact dermatitis. Because of the relative ease with which people can become sensitized to it, it has become one of the principal means for clinical and experimental studies on the subject. The recent synthesis of various components of urushiol has led to more intensive investigations in immunology and hyposensitization with the catechol derivatives. Shelmire,[1] in the 1940's, conducted extensive studies with poison ivy and weed oleoresins, and more recently Kligman[2] worked with 3-pentadecylcatechol and compared it with the oleoresins. Many others have worked extensively in the chemistry and clinical investigation of plant allergens but I do not think it necessary to mention them here.

FAMILY ANACARDIACEAE

I thought it would be of interest to present some of the members of the family Anacardiaceae which are sources of dermatitis (Table 1). The various catechols with saturated and unsaturated fatty acid side chains are the allergens in these plants. Cross-sensitivity to the various catechol allergens is regularly found in the sensitive individual. Three-pentadecylcatechol, which I will hereafter speak of as "PDC," is the most stable of the allergens and is the one Kligman[2] used in his extensive studies.

The two plants that are the chief sources of Rhus dermatitis in the United States are poison ivy and poison oak. Poison oak is limited to the western United States from New Mexico to British Columbia. It grows only as a tall bush; its leaves are hairy on both surfaces and, although variable in shape, resemble oak leaves. Poison ivy may grow as a short bush or shrub, a vine, a trailer, or a woody vine. It is the well-known three-leaflet plant with white berries. At a certain stage the leaf tips are red. The upper surface is smooth and the under surface is hairy. Poison sumac, although of less importance, is a tall bush with from three to seven leaflets on each long, reddish stem.

As to the mode of contact, some individuals believe themselves to be so sensitive that merely being close to the poison ivy plant will precipitate dermatitis. However, it has been shown that the pollen does not contain the allergen and that even direct contact with the unbroken leaf does not produce dermatitis. Smoke that is absolutely free of unburned particles of the sap does not cause dermatitis. Because spring brings many people to the woods, and fall lures the hunter, the incidence of dermatitis is greater in these seasons than in the others. Fomites such as clothing, animals, hunting and fishing equipment, golf clubs, automobile tires, and construction machinery may carry the dried sap. For example, several attacks of dermatitis on the lower portions of the legs of a golfing friend of mine were traced to golf club heads. He knew poison ivy, but was a golfer who spent some of his time swinging clubs in the brush. He also had a habit of gently stroking his legs with the club heads.

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* Adapted from a paper presented at the Thirtieth Annual McGuire Lecture Series and Symposium on Dermatology, Medical College of Virginia, November 12-14, 1958.

From the Department of Dermatology, The Cleveland Clinic Foundation, and The Frank E. Bunts Educational Institute, Cleveland, Ohio.

I think we are familiar with the morphology of the dermatitis produced by direct contact with outdoor plants: the lesions tend to be arranged in streaks on the exposed surfaces, and in patches on other parts, due to the transfer of sap by the hands. The severity of the eruption and of the secondary id eruption is determined by the degree of sensitivity of the individual. The oral mucous membranes may become sensitized either by chewing the leaf or on contact with the allergens.

Figure 1 shows ivy dermatitis on the legs of a



Fig. 1. Ivy dermatitis on the legs of a woman, showing the characteristic streaked pattern of the lesions.

nurse who recently immigrated to the United States from Germany. She spent her first vacation in Florida, where she acquired her first attack. The dermatitis appeared exactly seven days after her exposure to poison ivy. The characteristic streaked pattern of the dermatitis is clearly evident.

Figure 2 shows ivy mucositis in a lad of 15 years, who, on several occasions proudly demonstrated to friends his immunity to poison ivy by chewing some leaves. He chewed them once too often! and mucositis developed, involving the mouth and tongue. The reaction appeared on the day after the exposure. Dermatitis of the skin did not occur, although a patch test with ivy oleoresin was positive.

In addition to producing the skin eruption, fever, and other toxic manifestations, poison ivy may produce other less well known manifestations, especially in severe cases. Leukocytosis and eosinophilia of the blood are common. Eosinophilia also frequently occurs during hyposensitization therapy. Eosinophilia in the tissues at the sites of lesions is common. Renal damage approaching glomerulonephritis, with fatality, as an allergic reaction of the kidneys has



Fig. 2. Ivy mucositis on the face of a 15-year-old boy who had chewed poison ivy leaves to demonstrate his "immunity".

been reported,[4,5] although the allergy has been questioned by Templeton, Lunsford, and Allington[3] and Kligman.[2] Proteinuria has been reported[6] to occur in as high as 50 per cent of poison ivy patients. Again, these findings have not been confirmed.[2,3] Urticaria is uncommon in untreated Rhus dermatitis but common during hyposensitization. In untreated cases usually the eczematous lesions are so preponderant as to mask the anaphylactic component. Other reactions are id eruptions and dyshidrosis, which are likely to be overlooked, and occasionally there is depigmentation at the sites of the lesions.

A HETEROGENEOUS GROUP OF PLANTS

The incidence of dermatitis caused by a large number of heterogeneous plants is by no means small. Probably the greatest number of cases are contracted in an industrial environment. Edible vegetables and fruits cause dermatitis among farmers and workers on truck and fruit farms, in the processing industries, in stores, restaurants and in homes. Flowers, trees, and shrubbery cause dermatitis among workers in the horticultural and processing industries, extending through the florists and into the home. Dermatitis caused by trees, weeds, and shrubs occurs: among foresters and field workers for construction of rights of way through wooded territory; in the lumber

industry, among lumbermen, workers in lumber processing, fabrication, and chemical extraction, carpenters and persons working at home (using objects with wooden handles). Shelmire[1] routinely tests out-

TABLE 1

PLANTS OF THE FAMILY ANACARDIACEAE WHICH CAUSE RHUS DERMATITIS

Scientific name	Common name
Semicarpus anacardium	India ink tree or marking nut for laundry
Mangifera indica	Mango fruit
Anacardium occidentale	Cashew nut
Rhus toxicodendron verniciflua	Lacquer tree
Rhus toxicodendron radicans	Poison ivy
Rhus toxicodendron diversiloba	Poison oak
Rhus toxicodendron vernix	Poison sumac

door workers with extracts of 56 weeds and grasses. Most of the patients we see at the Cleveland Clinic are farmers, horticulturalists, housewives, gardeners, florists, carpenters, patternmakers, and a few are field workers. The patients cooperate by collecting samples of contact materials such as fruits, vegetables, flowers, weeds, sawdust, scrapings from wooden handles, and musical instruments, for patch tests. In addition to the extracts we have a supply of various pollens and oleoresin extracts on hand for patch tests.*

Figure 3 shows acute dermatitis in a florist, pro-



Fig. 3. Acute dermatitis on the hands of a florist, produced by contact with chrysanthemum plants.

duced by chrysanthemum. During the height of the dermatitis on the hands he experienced a generalized id eruption on the face, the V area of the chest, and

* Those who are interested in patch tests for weeds, grasses, trees, shrubs, in local geographic areas of the country, may obtain lists of plants as well as oleoresins for tests and hyposensitization, from Graham Laboratories, Dallas, Texas. We obtain pure pollens from Hollister-Stier Laboratories, Chicago, Illinois.

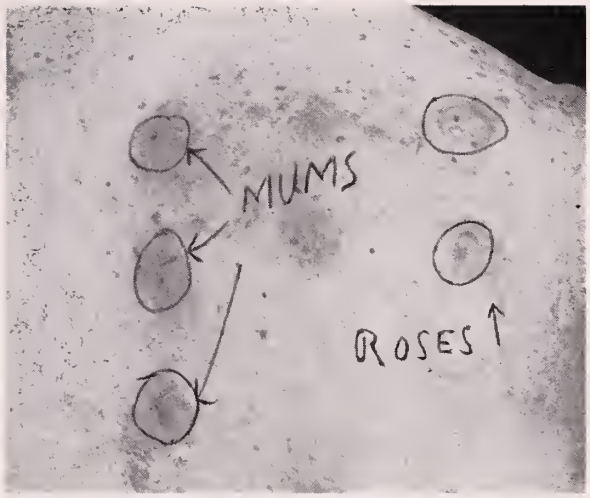


Fig. 4. Positive patch tests for chrysanthemums and rose leaves, respectively, in a garden-loving housewife.

the upper and lower limbs. Despite our attempts at hyposensitization, this patient also became sensitive to several other floral plants to such an extent that the dermatitis became nonseasonal, and he finally gave up being a florist. Figure 4 shows positive patch tests to chrysanthemum and rose leaves in a housewife who spent much time in her flower gardens.

POLLENS

Dermatitis from pollen is another type of plant dermatitis. The shell of the pollen grain contains the allergen, a resin-like material. Reactions occur mostly in persons who are farmers, gardeners, carpenters, salesmen, and field workers, who work out of doors and have contact with pollen-bearing plants. The typical seasonal appearance is often masked because of the secondary factors of chronicity, neurogenicity, and infection, which prolong the duration beyond the pollen seasons. However, in those who suffer from the dermatitis throughout the year, a careful history will show that exacerbations occur during the respective seasons for the various pollens.

The principal sites of the dermatitis are the exposed surfaces, namely, the face, neck, V area of the chest, arms, and legs. Early in the course the dermatitis is usually delineated by clothing. Figure 5 shows a patient with ragweed dermatitis. Note the sharp delineation of the dermatitis by clothing. This pattern is always suggestive of the so-called "air-borne" dermatitis. The dermatitis is usually subacute, but vesiculation may be found on the areas where pollen grains have adhered. The diffuse and even distribution of the eruption is attributed to the coalescing of minute individual papules produced by the grains of pollen.

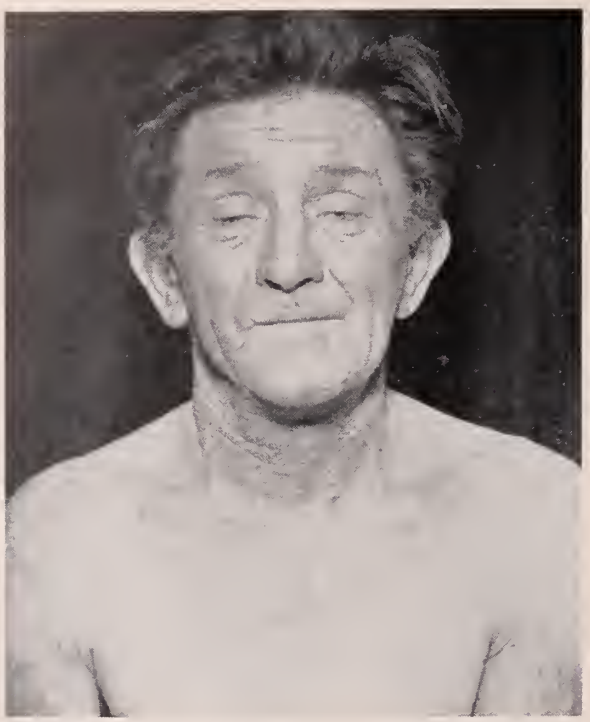


Fig. 5. Ragweed dermatitis in a man; note sharp delineation by clothing

The relationship between contact and atopic types of pollen dermatitis is of interest. In some patients, exacerbations of atopic dermatitis in the summer, aside from those due to humidity and sweating, are thought to be due to pollens. The contact dermatitis is due to the oil fraction, while the atopic or anaphylactic dermatitis is due to the water-soluble fraction. Waldbott[7] has noted exacerbations of atopic dermatitis produced by contact with pollens, and also that in atopic dermatitis, treatment with oil extracts has been effective and that in contact dermatitis treatment with aqueous extracts has been effective. We have frequently noted both the immediate and the delayed 48-hour papular response with aqueous extracts in atopic dermatitis. Occasionally, using pollen and its aqueous extract, we have obtained a positive patch test with the pollen, as well as the delayed papular reaction to the extract, in the same patient who has atopic dermatitis. This conforms to the concept that in plant sensitivity the sensitivity is systemic with both anaphylactic and eczematous antibodies.

A good history of the approximate dates of flare-ups will help to eliminate the application of an unnecessary number of patch tests. Lists of plants with the dates of pollination are a great help in selecting the most likely tree, grass, and weed pollens or oleoresins for testing. Patch tests may be applied with pollens, oil extracts, and leaves of plants.

The patient shown in Figure 6, a farmer's daughter, gave positive patch tests to pollens of ragweed, corn, and several of the grasses.



Fig. 6. Patch tests positive to pollens of ragweed, corn, and several grasses, on the back of a farmer's daughter.

MANAGEMENT

For practical purposes, it seems preferable to consider the management of plant dermatitis from three aspects: (1) topical prevention, (2) topical and systemic treatment, and (3) specific hyposensitization.

(1) Topical preventive measures include washing the skin after exposure, use of topical detoxicants, and teaching the individual to avoid the noxious plants and to be aware of possible fomites at all times. My experience with the detoxicants is limited to patients who report using them without benefit. Kligman[2] believes that detoxicants, including the ion-exchange resins, chelating agents, and the corticosteroids, are of no value in preventing dermatitis. I have learned about the inadequacy of washing the skin, from patients who have tried strong soaps, kerosene, gasoline, paint solvents, and turpentine.

(2) In topical treatment various preparations containing the corticosteroids have been ineffective in the acute vesicular and bullous stages. Antieczematous lotions such as calamine lotion or liniment containing antipruritics, wet dressings and/or baths with potassium permanganate are the most satisfactory. In subacute and chronic phases, lotions and ointments containing the corticosteroids are beneficial. Systemic treatment with corticosteroids and/or corticotropin is mandatory in severe cases, and for emotionally hyperreactive patients. The dosage equivalent of from 200 to 300 mg. of cortisone, and/or 40 units of corticotropin, daily, is indicated

during the first two or three days. Intravenous infusions of corticosteroids or corticotropin may be necessary. For some time now, the phylactic treatment with the extracts has been considered unnecessary and dangerous. Certainly the advent of corticosteroids and corticotropin has made this type of treatment obsolete.

(3) Hyposensitization in poison ivy and weed dermatitis has been extensively investigated by Shelmire[1] and Kligman.[2] Shelmire's[1] schedule with oleoresins has become well established. Kligman[2] has established a regimen with PDC. Both deplore parenteral hyposensitization with the oleoresins and PDC.

TABLE 2
ORAL HYPOSENSITIZATION WITH OLEORESINS*‡ OF POISON IVY AND WEEDS
(after Shelmire[1])

Dilution	Dose
1:100	1st week, 1 drop daily in No. 1 capsule 2nd week, 2 drops daily Thereafter increase dose more rapidly to tolerance
1:50	One half of number of drops in last dose of 1:100 dilution Increase to tolerance
1:25	One half of number of drops in last dose of 1:50 dilution Increase to tolerance

* Total dose—30 ml. each of 1:100, 1:50, and 1:25 dilutions.
‡ Time—8 to 9 mo.

Table 2 shows Shelmire's[1] method for both poison ivy and weed hyposensitization with oleoresin given orally. When the daily dose is increased by one drop weekly it usually requires eight months or more to take the required amount. In mild to moderate sensitivity, hyposensitization may require only two or three months. The regimen should be repeated every year.

The schedule of oral hyposensitization with PDC devised by Kligman[2] is shown in Table 3. He states

TABLE 3
ORAL HYPOSENSITIZATION WITH PDC
(after Kligman[2])

Week	PDC 10% in ethyl alcohol with 2.5% Aerosol OT and 0.1% Tenox Dose
1	1 drop daily
2	2 drops daily
3	3 drops daily for 4 days; 4 drops daily for next 4 days
4 to ?	Increase by 1 drop every 4 days to daily total of 30 drops until a total dose of 35 ml. has been taken.
Maintenance	5 drops or less daily

that PDC may not be available in the immediate future because of the costliness of synthesis. The drops are added to a full glass of water, stirred with a glass rod, and drunk through a disposable straw. For the average patient the dose of 30 drops daily is continued until 35 ml. has been ingested. A daily dose of 5 drops or less will usually maintain hyposensitization. When PDC becomes readily available it will probably be dispensed in tablets, because of its stability.

Kligman's[2] method of parenteral hyposensitization is shown in Table 4. He believes that this schedule

TABLE 4
PARENTERAL HYPOSENSITIZATION WITH PDC
(after Kligman[2])

Week	PDC 10% in sesame oil with 0.1% Tenox for intramuscular hyposensitization Solution (ml.)	PDC (mg.)
1	0.03	3
2	0.60	6
3	0.10	10
4	0.20	20
5	0.40	40
6	0.60	60
7	0.80	80
8	1.00	100
9-31	1.00	100
Maintenance: every 6 to 8 weeks	1.00	100

of treatment by intramuscular injection of PDC is conservative and provides adequate hyposensitization. However, the method is impractical: too many injections are required and adverse reactions are too numerous and severe. Oral hyposensitization is preferable.

Untoward reactions in oral hyposensitization are urticaria and other id eruptions, stomatitis, pruritus ani, and less often flare-ups of healed sites, and dyshidrosis. According to Kligman[2] severe reactions practically never occur in conservative oral hyposensitization. In some patients, continuation of hyposensitization is blocked by side reactions. Small doses of corticosteroids or of corticotropin, 40 to 80 units twice weekly, will suppress the reactions so that treatment can be continued.

There has been much discussion relative to the value of quantitative patch testing during the hyposensitization regimen and during maintenance of the hyposensitivity. While the method of control seems ideal, in office practice it is impractical. The end point for determining the progress of hyposensitization is the highest dilution that produces a positive

reaction at each testing. Interpretation of the results involves evaluation of reduction in degree of the dermatitis and the increase in concentration necessary to produce dermatitis by the patch test.

The advantages of hyposensitization are threefold: (1) shorter duration of an attack of dermatitis, (2) less spread of the eruption, and (3) milder dermatitis. The protection is partial and relative, depending on the degree of exposure. Estimates of the duration of hyposensitivity vary from months to years. In controlled experiments among prison inmates, Kligman[2] found that maximum hyposensitization lasted for from four to six weeks after oral prophylaxis and for from eight to 10 weeks after intramuscular treatment, after which the hyposensitivity began to wane slowly until maximum sensitivity returned in about six to eight months.

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Hospitalization of Child

The emotional shock that may occur when a child is hospitalized can be overcome when the mother stays with him, according to a New Haven, Conn., pediatrician. Writing in the February Journal of Diseases of Children published by the American Medical Association, Dr. Albert J. Solnit of the Child Study Center and department of pediatrics, Yale University, said "hospitalization of the child with the mother has served to overcome both physical and psychological difficulties.

"For young children and their parents, the hospital environment has represented a psychological hazard. The children are threatened by separation from their parents, fears of abandonment, and painful, frightening procedures in the hands of strangers.

"Since the mother may have the best access to the distorted fears of the young child, she can most effectively reassure her child. . . ."

Therefore, the mother is not replaced by the nursing or medical staff. On the contrary, the physician and nurse help the mother take care of her child.

The Educational Work of Robley Dunglison, M.D.

At The University of Virginia

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Dr. Robley Dunglison was born in Keswick, England, in 1798. He came to the University of Virginia in 1825 and taught anatomy, surgery, the history of the progress and theories of medicine, physiology, materia medica and pharmacy. His salary was fifteen hundred dollars with an additional amount from student fees.

IT WAS on January 25, 1819, that the General Assembly of Virginia passed the enactment that the University of Virginia was to be established in the County of Albemarle. However, it was not until 1825 that the University of Virginia was opened with twenty students enrolled in the School of Anatomy and Medicine. Between 1819 and 1825, Mr. Jefferson was very active in establishing a definite policy for the medical school. In his "Report to the Commissioner" he stated that since there were no hospital facilities for the University, it was proposed that a single professor for both medicine and anatomy be selected. This professor would lecture on the history of medical and anatomical theories from Hippocrates to the present. Vegetable pharmacy would be taught in the botanical course and mineral and chemical pharmacy in the courses of microbiology and chemistry respectively. This instruction was to be a foundation on which the student was to build his clinical knowledge which was to be gained elsewhere. The Board of Visitors on April 7, 1824, accepted Mr. Jefferson's ideas and stated that "In the School of Anatomy and Medicine shall be taught anatomy, surgery, the history of the progress and theories of medicine, physiology, pathology, materia medica and pharmacy" and it was decided to obtain a single professor to teach all of these subjects.

It was now the job to obtain a suitable man to fill this chair. After surveying possible men in this country and finding none suitable, the Board of Visitors in 1824 sent Francis Walker Gilmer to England in order to find a man abroad. It is of interest to note that the position was to be a full-time position with no income from private practice. Mr. Gilmer was able to persuade Robley Dunglison to take the position.

What were the qualifications of Dr. Dunglison? He was born in Keswick, England, in 1798. After a classical education, he commenced his study of medicine as an apprentice to John Edmondson in his home town. After one year with Dr. Edmondson, he went to London as an assistant to Dr. Haden. He then went to Edinburgh in order to attend a course of lectures and later attended a series of lectures in Paris. He thus was under the most brilliant group of medical professors of his day. In 1818 he passed his examinations at the Royal College of Surgeons and the Society of Apothecaries in London which gave him the right to practice medicine. Later he obtained an M.D. degree at the University of Erlangen in Germany, by examination and the submission of a thesis on "Neuralgia". At an early age, he started to write and continued to write throughout his life. In fact, it was his writings that attracted Gilmer to him in London and lead him to offer the position here.

In the collection of letters of Dunglison in our library there is one from George Birbeck recommending Dr. Dunglison to Mr. Gilmer, dated 29th of August, 1824. It states "This gentleman in consequence of habits strictly literary and a taste leading to actual investigation, with a decided tendency to

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prefer the contemplative species of occupation to the more bustling, would be well placed in the University of Virginia, and I am persuaded that he would there not only distinguish himself but greatly benefit the students who might be placed under his direction." The next letter is from Dr. Dunglison to Mr. Gilmer, dated September 5, 1824, accepting the chairs of Anatomy and Chemistry. The contract between Mr. Gilmer and Dr. Dunglison stated that he would teach, with proper diligence and to the best of his ability, anatomy, surgery, the history of the progress and theories of medicine, physiology, materia medica and pharmacy and for this, he would be paid fifteen hundred dollars with an additional amount from student fees. He would also be entitled to occupy one of the pavilions of the University free of rent.

The collection of student fees bothered Dunglison. In a letter dated April 3, 1826, to the Board of Visitors, he states that the requirements for Latin should be modified for the medical students. He thought that this requirement was retarding the enrollment in the medical school, for his salary was less than he had reason to expect.

At the time of the offer, Dr. Dunglison wished to get married and this salary offered him sufficient security. He accepted the post and arrived in Charlottesville in 1825. Mr. Jefferson was very pleased with Dr. Dunglison. This was remarkable for, as Dr. Dunglison stated later, Mr. Jefferson had little faith in doctors stating that "It is not to physic that I object so much as to physicians".

Dr. Dunglison gave his lectures in these many subjects justifying this method by stating that students would not be distracted by discordant statements of many professors and repetition would be avoided. He remained at the University for eight years, leaving for the University of Maryland in 1833 and later going to Jefferson Medical College.

In addition to his teaching duties, Dr. Dunglison continued to write while in Charlottesville. He published with George Long, in 1829, an Introduction to the Study of Grecian and Roman Geography and in 1832 published his "Human Physiology". This text went through seven editions, the last one in 1856. In 1833, he published his "New Dictionary of Medical Science and Literature". This dictionary reached its 23rd edition in 1897 and sold 55,000 copies. His physiology and dictionary were his chief contributions during his professorship in Charlottesville. Also, he was one of the founders and editors of the Virginia Literary Museum and Journal of Belles-Lettres, Arts and Sciences, a weekly periodical, issued at Charlottesville, in the interest of the University. Dr. Dunglison wrote many of the articles in this journal on numerous subjects such as Modern Improved System of Road-Making, Penitentiary Discipline and Sanscrit Language.

As a scientist he aided Beaumont in his famous experiments on the gastric juice of Alexis St. Martin. Beaumont, in his book on "Experiments and Observations on the Gastric Juice and Physiology of Digestion", states that he sent a sample of gastric juice to Professor Dunglison who with the assistance of the Professor of Chemistry of the Virginia University made an analysis. Beaumont in his book, gives in part a letter from Dr. Dunglison dated February 6th, 1833. In this letter, Dr. Dunglison described that free muriatic (hydrochloric) acid was found in the gastric contents. Beaumont states "Those who are acquainted with him, know his candor and fairness are above the reach of suspicion."

There have been many tributes to Dr. Dunglison. Dr. Radbill, in a recent article on Dunglison, states that Dunglison was a teacher in all he did. He was a friend to the young, his writings were widely used by students and doctors. His home was noted for its sociability. He favored preliminary education in Mathematics, Languages, English and Sciences. He introduced into the curriculum the teaching of the History of Medicine. It is of interest that he was the first full-time professor of medicine in this country with his salary coming from the University and students and not from private practice. It was under his guidance that the School of Medicine of the University of Virginia was started.

Osler states that Thomas Jefferson did a good work when he imported him from London, as Dunglison had all the wisdom of his day and generation combined with a colossal industry. Gross, in "A Memoir of Robley Dunglison", says that Dr. Dunglison was no ordinary man; indeed, in more than one sense of the term, he was an illustrious man, a great scholar, an accomplished teacher, a profound physiologist, an acute thinker, a facile writer, a lucid, erudite and abundant author.

In conclusion, I would like to quote from Sarton, "Too many of our scientists are technicians and nothing more. Our aim is to humanize science and the best way of doing that is to tell and discuss the history of science. If we succeed, men of science will cease to be mere technicians and will become educated men."

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New Psychotherapeutic Drug

A new psychotherapeutic drug, methaminodiazepoxide (Librium) has produced "impressive" results in the treatment of various mental disorders, according to Dr. Titus H. Harris, a Galveston, Texas, psychiatrist.

In a preliminary communication in the March 12th Journal of the American Medical Association, Dr. Harris said the drug reduces anxiety and agitation but does not cloud consciousness or impair intellectual function.

"My experience with its use in all types of anxiety, such as convulsive disorders, tension states, obsessive-compulsive conditions, agitated depressions, and jitters in alcoholics indicated that methodaminodiazepoxide is one of the most interesting drugs of its type that has been developed."

"Of special interest is its apparent effectiveness in obsessive-compulsive neuroses, which have thus far defined chemotherapeutic management."

Dr. Harris said the drug exerts three primary actions—tranquilization, muscular relaxation, and anticonvulsant effect.

"At a recent symposium . . . investigators in a number of medical specialties, including internal medicine, cited impressive results obtained from use of methaminodiazepoxide in a variety of conditions and a freedom from side-effects at therapeutic dosage levels. These investigations confirm my findings. . . "

The drug was described as "one of a new class of compounds" by Dr. Harris, chairman and professor of the department of psychiatry and neurology, University of Texas Medical Branch. He said its unique action on vicious, agitated monkeys, dingo dogs, and other wild animals prompted the first clinical trials.

The Control of Weight in Hypertensives on Rauwolfia and its Derivatives

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In the obese hypertensive patient there is need of weight control as well as reduction of blood pressure. Rauwolfia is a useful hypotensive drug but may stimulate the appetite and cause a gain in weight. Many of the appetite suppressing drugs raise the blood pressure. A new drug appears to be a solution to this dilemma.

IT IS WELL KNOWN that obesity is particularly dangerous to the hypertensive. Indeed it is even possible that obesity may be an etiological factor in the development of hypertension for not only is it often noted in conjunction with hypertension, but obesity may in many cases precede elevation of blood pressure. Furthermore, it has been amply confirmed that weight reduction in many cases will lead to a reduction of blood pressure and that maintenance of a desirable weight may be accompanied by maintenance of normotensive levels of blood pressure. Therefore, it behooves the physician who is dealing with the obese individual and particularly with the obese hypertensive to encourage weight reduction and help the patient to achieve it. This in fact should be the first step in a regimen of therapy for moderate and mild hypertensives who are obese, for often they will need no further therapy. If, however, the patient's hypertensive state is of such a degree to require more than simply weight reduction, this can now be achieved by the use of a variety of relatively recently developed pharmacological agents that have potent and anti-hypertensive effects. Perhaps the most important and widely used among these agents have been rauwolfia and its derivatives alone or in combination with other anti-hypertensive drugs. However, in the obese hypertensive, rauwolfia has proved to be something of a "two-edged sword" for there is now suitable evidence to indicate that rauwolfia may stimulate the appetite while it is bringing down the blood pressure and this may often be accompanied by excessive gains in weight. The undesirability of this side effect of rauwolfia is obvious and often this secondary effect of the rauwolfia derivatives have more than off-set the benefits gained from its anti-hypertensive action. Indeed the appetite stimulation that occurs with rauwolfia preparations has been sufficiently pronounced so as to have lead to their use as an appetite stimulant in patients who are undernourished and in children who are eating poorly. The practicing physician therefore is faced with something of a quandary in dealing with the obese hypertensive patient who requires mild drug therapy and in whom rauwolfia derivatives seem to have an appropriate place in management. On one hand the physician is impelled to use a drug which he knows will help the patient's hypertensive condition and on the other hand he must be aware of an undesirable appetite stimulant, which will intensify the desire to overeat and hamper attempts to have the patient reduce weight concomitant with the anti-hypertensive treatment. It is hard indeed to get the average obese individual to adhere to a program of weight reduction. It is considerably harder to achieve this goal in a patient whose appetite is unduly stimulated by a pharmacological agent.

The solution to this dilemma would appear to be the administration of yet another agent to suppress the appetite and thereby counteract the undesirable side effect of the rauwolfia preparation. The need to utilize means of helping the patient curtail his caloric intake is clear. Unfortunately the commonly used appetite suppressant drugs are unsuitable for use in the hypertensive subject, because these drugs tend to overstimulate the patient and often result in a further elevation of blood pressure.

The recent development of a new anorexigenic drug has offered an opportunity to resolve this problem. Experience with levo-1-phenyl-2-aminopropane alginate (LEVONOR) has indicated that it is a

potent anorectic drug that is remarkably well tolerated and is not accompanied by the usual analeptic effects. In clinical trials with this preparation, patients have been found to achieve appetite suppression without either stimulation or blood pressure elevation.

The study reported here was undertaken to determine the effectiveness of this new anorexigenic medication in preventing undesired weight gains during rauwolfia therapy of obese hypertensive subjects.

METHODS AND MATERIALS

Forty-one private patients who were being treated for hypertension were selected for study. All of these patients either were receiving or in the past had received some form of rauwolfia. The study plan included a diet that was low in salt and low in calories, and each patient was thoroughly schooled and educated with respect to dietary management. In addition, the patients were given a derivative of rauwolfia in order to obtain satisfactory blood pressure levels, and as an adjunct to therapy each was instructed to take levo-1-phenyl-2-aminopropane alginate (LEVONOR)—a dosage of 5 mg. three to four times a day, the last dose being given at 8 p.m. —a few patients were given even larger doses. The treatment was continued for periods of five to forty-four weeks.

As the study proceeded it was clear that the patients could be classified into two groups. Group One included individuals who appeared generally amenable to medical regimentation and followed their diet and pharmacological therapy rigidly. Group Two included those patients who were less cooperative and less reliable in following therapeutic regimen. Group One comprised fourteen male patients and sixteen females ranging in age from 28 to 58 years. Before treatment, sixteen of these patients weighed in excess of 200 lbs., and five in excess of 240 lbs.—one weighed 290 lbs. The average pre-treatment weight for this group was 204.5 lbs. Group Two included one male and ten females ranging in age from 34 to 68 years. Six of these patients weighed in excess of 200 lbs.—three weighed 214 lbs. The lightest patient in this group weighed 168 lbs. and the average weight of patients prior to treatment was 179 lbs. This group of patients in whom less favorable results could be expected generally were found to have their hypertensive disease more firmly established and at somewhat higher levels. In addition, several of these patients suffered concomitantly from one or more other conditions, including chronic cystitis in two females, diabetes and proctitis in one, and duodenal ulcer, arthritis and infectious hepatitis, acne, edema and menopausal complaints in others. As a group, these patients appeared to exhibit marked emotional disturbances and anxiety from domestic problems.

RESULTS

Blood pressure levels were controlled by the use of rauwolfia or one of its derivates in each patient studied in this series. Every patient in Group One lost weight during the course of the study, with individual losses ranging from 5.5 to 34 lbs. Loss of weight of 2 lbs. a week or more were noted in seven patients, and fifteen more had reduced their weight on an average of 1 to 2 lbs. a week. Eight patients showed less than one pound a week weight loss. The average over-all weight loss of patients in this study group was approximately 16 lbs.

The patients in Group Two had less satisfactory results. Ten patients succeeded in losing weight while one gained 7½ lbs. This patient, a 34 year old woman, weighed 188½ lbs. at the start of treatment and reached 196 lbs. before being dropped from the study as completely uncooperative. The over-all average weight loss of the eleven patients in this group was 0.33 lbs. There was, however, considerable variation in weight loss exhibited by these patients. While some were very careless about taking medication, others showed varying degrees of cooperation at different period while under study. One 68 year old woman who weighed 214 lbs., and suffered concomitantly from rheumatoid arthritis was given steroid therapy for the latter disease in addition to the low salt, low calorie diet. She succeeded in losing 11 lbs. in 34 weeks despite the tendency to retain sodium and water which might be expected from her steroid therapy. One patient in this group, a 34 year old male who weighed 214 lbs. was given a placebo for a four-week period instead of the anorexigenic drug. During this period he gained 1.5 lbs. Subsequently, the placebo was substituted for 5 mg. levo-1-phenyl-2-aminopropane alginate (LEVONOR), and during the next 4 weeks he lost 7.2 lbs. or an average of 1.8 lbs. per week.

As might be anticipated, the degree of success in the weight reduction and blood pressure reduction program tended to vary directly with the degree of cooperation exhibited by the patient. By and large, those patients who were most cooperative succeeded in losing the greatest amounts of weight, and in these patients blood pressure reductions were most dra-

matic. In patients in whom cooperation was less satisfactory weight loss tended to be less marked and blood pressure control less satisfactory. Thus a 37 year old man who weighed 274 lbs. at the onset of the study lost 34 lbs. in six weeks for an average of 5.6 lbs. per week. His blood pressure fell to the upper limits of normal. Another patient, a 36 year old woman, weighing 185 lbs. lost 21 lbs. in six weeks for an average of 3.5 lbs. weekly and her blood pressure similarly fell dramatically. On the other hand, an uncooperative 36 year old woman who weighed 175 lbs. failed to take her prescribed medication and was not cooperative with respect to her dietary restrictions. She lost only 2 lbs. in twelve weeks, and the reduction of blood pressure was only slight. Another 53 year old female beset by domestic problems who weighed 214 lbs. succeeded in losing only 5 lbs. in six weeks of treatment for an average of 0.83 lbs. per week. She too had a relatively unsatisfactory blood pressure response.

DISCUSSION

The relationship between obesity and hypertension is well established. All authorities agree that obesity tends to aggravate hypertension, and in many cases precedes it in such a fashion as to suggest a possible relationship in the pathogenesis of the hypertensive state. Whether or not there is a cause or relationship between the two conditions, certain it is that the hypertensive subject is benefited by weight reduction. Many hypertensive patients, however, require the use of drug therapy in addition to dietary therapy in order to satisfactorily control blood pressure levels.

In recent years, in fact, there has been an increasing tendency to utilize pharmacological agents to reduce blood pressure in earlier and milder cases of this disorder with the view that control of blood pressure might very possibly reduce the danger of undesirable and even lethal vascular complications from the hypertension. Unfortunately, a weight reduction program based on caloric restriction alone is often unsuccessful in the management of the hypertensive obese subject, and many of these patients do far better with respect to maintenance of caloric restriction by the adjuvant use of an appetite suppressant. Most of the drugs utilized for this purpose have been the amphetamines, and these drugs tend to stimulate the central nervous system of the patient to whom it is administered, and at the same time often will lead to the further elevation of blood pressure. Similarly rauwolfia and its derivatives, one of the most useful therapeutic agents in the management of mild to moderate degrees of hypertension, are often accompanied by the undersirable side-effect of appetite stimulation so that many patients to whom this drug is administered gain weight. This situation presents the physician with something of a dilemma in the managing of the obese hypertensive. On one hand it is desirable to reduce blood pressure, but on the other it is equally desirable to reduce weight. Neither of these things can be accomplished in many patients without the use of drug therapy, and unfortunately the drug that is suitable for blood pressure reduction in many of these patients causes augmentation of appetite; whereas, the drugs that have been used to curb appetite tend to aggravate the blood pressure.

The recent development of a new appetite suppressant drug, levo-1-phenyl-2-aminopropane alginate (LEVONOR) appears to provide a solution to this uneasy dilemma. This medication, while curbing appetite, appears to have little, or any, analeptic activity. It seemed therefore that this drug would be ideally suited for use in the overall management of the hypertensive obese subject, particularly when the patient was being given rauwolfia or one of its derivatives in order to control blood pressure. This paper reports results in the series of 41 obese hypertensive patients who were treated with both rauwolfia and levo-1-phenyl-2-aminopropane alignate (LEVONOR) along with a low salt, low calorie diet. The anorexigenic drug was administered three or four times daily before meals in 5 mg. doses, and in many cases the fourth 5 mg. tablet was administered at 8 p.m. as well. These patients showed an excellent response both in terms of blood pressure and appetite suppression. In all patients who were cooperative, good weight reduction was achieved along with reduction of blood pressure to satisfactory levels. As might be expected, results were less striking in patients who were less cooperative. These patients lost less weight and exhibited less satisfactory blood pressure control. However, forty of the forty-one patients succeeded in reducing their weight to some degree while only one gained weight. None of the patients exhibited any signs of undue central nervous system stimulation despite the fact that the medication was often given as late as 8 p.m.

The findings in this study tend to confirm those of earlier studies with respect to the efficacy of levo-1-phenyl-2-aminopropane alginate (LEVONOR) as an appetite suppressant in obese individuals. Comparison of this drug with other anorexigenic preparations shows it to be fully as effective as any in suppressing appetite, and at the same time less

stimulating and better tolerated. This study appears to establish it as the drug of choice in the management of the obese hypertensive individual in whom weight reduction is particularly important and in whom appetite may be further stimulated by the use of rauwolfia preparations to control hypertension. It would appear likely that this drug would be well suited for the management of the obese diabetic who poses many similar problems in therapy and in whom unwanted weight gain, particularly with the use of oral hypoglycemic agents may be an undesired side effect.

SUMMARY AND CONCLUSIONS

Forty-one obese hypertensive patients were maintained on a low calorie, low salt diet with the administration of rauwolfia derivatives to control hypertension and levo-1-phenyl-2-aminopropane alginate (LEVONOR) as an appetite suppressant. All but one of the patients succeeded in losing weight while on this regimen and in almost all the blood pressure was satisfactorily controlled. In general, weight reduction and blood pressure control was found to be proportional to the degree of cooperation exhibited by the patient. Levo-1-phenyl-2-aminopropane alginate (LEVONOR) appears to be an ideally suited anorexigenic drug. It succeeds in curbing appetite without any untoward and undesired central nervous system stimulation or aggravation of blood pressure elevation, and at the same time allows rauwolfia and its derivatives to be administered without concomitant appetite stimulation so frequently noted with these preparations.

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Restoring Invalids to Active Life

An improved electronic pacemaker, a device that stimulates the heart, is restoring incapacitated cardiac patients to an active life. The device, originally designed for persons who had undergone heart surgery, is now being used increasingly for nonsurgical patients who sustain heart block as a complication of various afflictions of the heart muscle, according to the April 30th Journal of the American Medical Association.

The portable, lightweight, transitorized pacemaker consists of a self-contained battery of long life which delivers a repetitive electrical stimulus by means of a stainless steel electrode which is implanted in the heart and runs through the chest wall to the externally worn pacemaker. Because the entire apparatus is self-contained and only slightly larger than a package of cigarettes, the patient can use it with complete freedom of movement. For this reason it has been found to be particularly useful for persons who, after the heart block occurs, are incapacitated because of intermittent fainting spells or because their heart is too weak to permit physical activity.

The article was prepared by C. Walton Lillehei, M.D.; Vincent L. Gott, M.D.; Paul C. Hodges, Jr., M.D.; David M. Long, M.D., and Earl E. Bakken, B.E.E., department of surgery and the Variety Club Heart Hospital, University of Minnesota Medical School, Minneapolis, on the basis of 66 surgical and nonsurgical patients at the University of Minnesota Hospitals who used the miniature pacemaker.

The longest continuous stimulation of a nonsurgical patient's heart by means of the device has been 15 months, and it was still in use. "The question of how long stimulation can be maintained appears to be related to electrode materials, design, and technique of implantation. If an electrode does fail, another may be implanted."

The authors also said a future refinement of such devices probably will be the use of electromagnetic induction to replace the electrode.

". . . experimental work in dogs has indicated the feasibility of implantation of a tiny coil within the myocardium and the use of electro-magnetic waves through the intact chest wall from a transmitter on the skin surface."

Portal Caval Shunt

A Reappraisal

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Patients, who in the past would have been doomed to progressive liver disease and its complications, are now being salvaged by shunt operations on the portal vein. A better understanding of the dynamics of the portal circulation in cirrhosis of the liver has been necessary in developing these procedures.

THE STATUS of a portal caval shunt procedure has changed considerably in recent years and within the past few months. In the past, the portal caval shunt or spleno-renal shunt was primarily reserved for those patients who had multiple episodes of esophageal bleeding for varicosities or the occasional patient with a Banti-like syndrome consisting of hypersplenism and the coexistence of esophageal varices. Indeed, the presence of ascites was thought by many to contraindicate a shunt procedure and this concept has been held by many until recent investigative procedures have shown this to be incorrect.

To understand the formation of ascites in portal hypertension one has only to understand the various stages of decompensations which occur following the cirrhosis and peri-portal scarring. Initially, the smaller venous radicals within the liver are capable of conducting the portal blood through this diseased organ. As the scar tissue increases the peri-portal obstruction, the collateral vessels within the liver parenchyma itself are unable to conduct the normal flow at a satisfactory rate through the liver bed, and a back flow or portal hypertension occurs. This may initially manifest itself only by distension of the portal vein with increase in pressure in the splenic and mesenteric vessels, edema within the mesentery of the small bowel and "sluggish" absorption of nutrients from the G.I. tract. A further complication is the inadequate transportation of the products of nutrition through the portal system, and incorrect synthesis within the liver. This produces a nutritional deficit in the patient already suffering from a chronic illness and a diseased liver. Next is the development of progressive edema of the mesentery and lymphatics in this region with a gradual weeping or outpouring of serous protein transudate through the portal bed, mesenteric and splenic vessels. This is the beginning of the accumulation of ascitic fluid which in the past has been thought to contraindicate portal caval shunt. The increase in portal backflow causes a similar increase in pressure within the esophageal, coronary, and gastric veins and the development of enlarged, distended and thin-walled esophageal vessels. Bleeding may or may not occur from these dilated varicosities; however, if bleeding does not occur, the ascitic fluid will continue to accumulate, eventually producing the typical far advanced post-cirrhotic patient with massive ascites, distended abdomen, enlarged vessels over the upper chest and abdomen (Caput Medusae) and demonstrable esophageal varices either by esophagoscopy or as demonstrated by barium swallow.

This patient in his far advanced state has a low total protein because of the continual loss of transudate high in albumin and globulin from the bloodstream into the free peritoneal cavity. A severe malnutrition occurs with significant loss in body mass although the patient's weight may remain fairly stable due to accumulation of functionless ascitic fluid. Such a patient almost certainly has no chance of recovery unless the tension in the portal system can somehow be reduced or shunted to reverse this lethal sequence. It is of course obvious that the liver itself must have enough functioning parenchyma to support life. It has been estimated that a great mass of total liver can be destroyed (90%) before reversal of hepatic function occurs. This must be true, since a massively cirrhotic liver can apparently support life if the distended venous radicals within

its system and in the portal bed are adequately decompressed.

This paper then concerns itself with viewing the cirrhotic, ascitic patient as a surgical candidate when properly evaluated by liver function studies and when seen from the viewpoint of a mechanical venous obstruction which must be improved to reverse the unrelenting and progressive portal hypertension. There is no known drug which can do this—there are most certainly, diuretics which will temporarily reduce the ascites by renal mobilization of fluid. There are methods such as multiple paracenteses which can remove the ascitic fluid but with concomitant loss of protein material and progressive wasting of the patient. There are diets low in protein to prevent ammonia intoxication and to afford a high carbohydrate and high vitamin supplement. These most certainly are adjunctive methods of treatment for the patient with severe liver disease and ascites, but they in a sense are similar to the medical treatment of a patient with mitral stenosis and failure. Digitalis and diuretics are but temporizing agents when used alone, that is, when the underlying condition of stenosis has not been surgically corrected.

RESEARCH STUDIES INDICATING THE VALUE OF PORTAL CAVAL SHUNTING PROCEDURES

The side-to-side portal caval shunt is specifically mentioned since it serves to decompress the engorged venous bed within the liver as well as to decompress the more distal portal system. The end-to-side shunt leaves the hepatic venous bed undecompressed, and as demonstrated by pressure studies proximal and distal to the clamped portal vein at the time of operation. An elevated portal pressure on the hepatic side of the clamp indicates elevated pressure within the hepatic venous system and suggests that a side-to-side shunt is necessary for hepatic decompression. Rousselot[1] has shown that the rate and the pressure of the hepatic blood flow is not changed in the presence of increasing collateralization. The development of esophago-gastric varicosities decreases the hepatic blood flow but the portal tensions are not decreased. This study concludes that with diversion of the portal blood through gastro-esophageal vessels and development of esophageal varices, that this not only fails to decompress the portal system but decreases the blood flow through the liver, increases the possibility of rupture of these thin-walled varicosities, and further decreases the transportation of nutrient material to the liver parenchyma. Warren and Muller[3] have performed rather conclusive studies on the hemodynamic changes in cirrhosis in which they strongly emphasize the role of the obstructive factor in the cirrhotic liver as related to the development of portal hypertension. McDermott[3] has also shown the importance of the combined hepatic and portal decompression in the treatment of ascites. This contrasts with those authors[4] who have felt that portal hypertension is contributed to by the development of arterio-venous fistulae in the gastro-intestinal tract especially in the stomach. The work of Warren has been further verified by our experience and is shown briefly in the pressure studies of the accompanying diagram. The increase of portal pressure on the hepatic side of the clamp does not support the concept of pressure elevation maintained by hepatic arterio-venous fistulae but rather by the obstructive theory of back pressure due to venous occlusion in the venous channels. Pressure determinations on each side of the portal clamp and wedge pressures of the hepatic venous bed reveal that increased pressures in the proximal or hepatic system regularly occur in the cirrhotic patient. This indicates to us the value of the side-to-side shunt to decompress the hepatic as well as the general portal circulation.

PORTAL VEIN PRESSURE STUDIES

	FREE PORTAL PRESSURE PRE-SHUNT	HEPATIC PORTAL PRESSURE WITH PORTAL VEIN OCCLUDED	POST SHUNT PORTAL VEIN PRESSURE
Case 1	310 mm. H20	300 mm. H20	90 mm. H20
Case 2	290 mm. H20	290 mm. H20	100 mm. H20
Case 3	300 mm. H20	280 mm. H20	120 mm. H20

The presence or absence of ascites or esophageal varices indicates that this particular stage of development in the disease process has not occurred. Certainly, portal hypertension of a significant degree will eventually cause a decompression through the collateral channels—the coronary veins—and esophageal varices will result. Accordingly, portal hypertension of a significant degree will eventually cause a decrease in motility of the small intestine with resultant edema, transudation and ascites. The full-blown ascitic patient with portal hypertension and esophageal varices has arrived at the end stage of his

disease. It seems logical that such a stage is undesirable and that earlier surgery is indicated. Welch[5] has performed an interesting clinical study on the side-to-side portal caval shunt in the treatment of ascites. In his series, fourteen patients with cirrhosis and ascites were operated upon using the side-to-side shunt technique. This author had satisfactory results with this procedure on all fourteen patients with significant reduction or disappearance of ascites, decrease in malnutrition of the patient, and in many instances return to a normal existence. Such a shunt, he points out, provides new egress from the congested liver and allows, as well, a certain amount of the portal blood to reach the liver bed. It should be mentioned that there are those who feel that side-to-side shunt is not strongly indicated. Among these have been Linton, Child, and Madden[6] (Discussion on the topic "Surgery for Ascites and Cirrhosis"—Ann. Surg., September 1959). These authors apparently feel that a side-to-side shunt not only removes the portal venous blood from the liver, but also some of the hepatic arterial blood is shunted into the inferior vena cava, thereby depriving the liver of both its venous and arterial supply. This reasoning seems to have been disproven by the clinical results of both Warren, Welch and our own series. We have had no incidents of liver failure in the three patients thus far studied, nor have Welch or Warren.

Furthermore, the portal system once decompressed allows better absorption of food from the G.I. tract and decreases protein loss which otherwise continually occurs through transudation. The patient with esophageal varices with or without a history of bleeding provides a further indication for portal caval shunting.

The technical procedure of the shunt is no longer significantly formidable. A liver which is decompensating with elevated blood ammonia levels and early ammonia intoxication certainly provides a strong contraindication for surgery. However, if the patient is alert, has liver function studies within a fair range of normal, especially has adequate serum proteins, then we consider a side-to-side portal caval shunt an indication with or without varices if ascites is present. If varices alone are present without ascites we also consider this an indication for the shunt procedure.

This operation is best done through a right thoraco-abdominal approach, dislocation of the right lobe of the liver into the chest and clear identification of the portal vein and vena cava.[7] Frequently, the caudate lobe of the liver must be resected in order to bring the inferior vena cava and portal vein together without undue tension and to provide an adequate lumen for anastomosis. This procedure can be done without significant bleeding or difficulty. Pressure studies are taken at the time of operation of the free flow within the portal vein and flow on the hepatic side of the clamp. Wedge pressures of the hepatic venous bed are also measured. A side-to-side shunt is then performed making the anastomosis approximately 1½ cm. in size.

The patient facing such surgery is given antibiotics for several preoperative days and also treated with Vitamin K and transfusions as seem indicated.[8] Blakemore has emphasized the importance of a "crash" program prior to surgery on cirrhotic patients. This refers to multiple transfusions, adequate protein and vitamin diet, etc.

PRESENTATION OF CASES

Case 1—J. M.—45 year old white male. This patient had a long history of ascites requiring multiple paracenteses, hepatic function studies on repeated occasions indicated cirrhosis with alcoholic history as the basis. The patient had not worked for six months, had become progressively debilitated with a markedly distended abdomen, extreme weight loss and cachexia. Liver function studies showed a B.S.P. of 39%, a total protein of 5 gms. with a reversal of the A G ratio. Patient also had a slightly elevated Bilirubin and thymol turbidity and flocculation studies were positive.

Because of the fact that weekly paracenteses were required and the patient was going progressively downhill with hypoproteinemia and nutritional failure, consideration was given to a portal caval shunt. He was treated with a so-called "crash" therapy consisting of intramuscular vitamins, blood transfusions, broadspectrum antibiotics, high supplement diet, and hospitalization. Repeat liver function studies showed the B.S.P. had fallen to 31%, however, the other studies remained abnormal. The total proteins were not improved.

In December, 1958, a side-to-side portal caval shunt was done under hypothermia. At this time free portal pressure before shunting revealed a pressure of 310 mms. of water, pressure in the hepatic portal vein with the portal vessel clamped revealed a pressure of 300 mms. of water, and at the completion of the portal caval anastomosis the free portal pressure had dropped to 90 mms. of water.

This patient is one year postoperative, has gained

approximately 40 lbs. of tissue mass, and has no recurrent ascites. He works full time, sleeps and eats well, and is immensely appreciative of his improvement.

Repeat liver function studies recently revealed all flocculations to be within normal limits. Total proteins 6½ gms. without reversal of the A/G ratio, B.S.P. 18% in one hour.

Case 2—J. O., 58 year old white female. This patient had rather severe G.I. disturbances for a number of years with multiple hospital admissions. X-rays demonstrated possible esophageal varices without other G.I. Pathology. Examination revealed an enlarged spleen and liver which was markedly tender. On several occasions the spleen was felt to be extremely enlarged but seemed to become smaller over a course of several days.

Esophagoscopy revealed a small rosette of esophageal varicosities at the cardio-esophageal junction. Punch biopsy of the liver revealed Laennec cirrhosis presumed to be on a post-hepatitis basis since there was no history of alcohol consumption.

Liver function studies revealed a slightly elevated B.S.P. of 21%, flocculation studies were negative, there was no jaundice. Other laboratory studies were within normal limits.

Because of the large liver and spleen and the presence of esophageal varicosities it was felt that this patient had portal vein obstruction either on the basis of a cirrhotic liver or a portal vein thrombosis. On 9/26/59 a side-to-side portal caval shunt and splenectomy were performed.

Pressure studies at the time of operation revealed a free portal vein pressure of 290 mms. of water, hepatic portal pressure with portal vein clamps was 290 mms. of water, a portal pressure at the completion of the anastomosis was 100 mms. of water.

Surgery was done with the benefit of hypothermia.

This patient has done well since the operation although it is too early to evaluate her from the point of view of esophageal varicosity problems. It is presumed that the rather marked reduction in portal pressure following the anastomosis would obviate the problem of further coronary and esophageal vein dilatation.

Case 3—C. H., 58 year old white male with a long history of alcoholism with progressive ascitic formation and liver function studies compatible with cirrhosis.

The patient was not a problem because of the ascites but because of the enlarged spleen with persistent low white count. It was felt that hypersplenism existed with the associated cirrhosis and increase in portal vein pressure. Esophagoscopy and barium swallow did not reveal esophageal varices. Because of the persistent enlargement of the spleen and hypersplenism as well as cirrhosis it was felt that the patient would benefit from a splenectomy and portal caval shunt. Accordingly, on 8/25/59 a splenectomy and side-to-side portal caval shunt were performed, under hypothermia.

Pressure studies at the time of operation revealed a pressure of 290 in the free portal vein, a pressure of 290 in the hepatic vein with the portal vessel occluded, and a post-anastomosis pressure of 120 mms. of water.

Postoperatively the patient did poorly during the recuperative phase with a poor wound healing, a prolonged ileus requiring intravenous therapy, multiple dressing changes, etc. The patient eventually healed without difficulty however, and has now returned to his work.

DISCUSSION

A brief background and etiology of portal hypertension and cirrhosis is given with emphasis on the role of obstruction as the cause of portal pressure elevation. It is felt that with cirrhosis there develops an hepatic block to the portal circulation and that arterio-venous fistulae do not significantly contribute to the increase in portal pressure. This has been demonstrated by clamping the portal vein in patients with portal hypertension and then measuring the pressures on the hepatic and portal sides of the clamp. Increase in pressure on the hepatic side must indicate obstructive elements within the liver rather than arteriovenous fistulae.

The cirrhotic patient develops a gradual venous obstruction in his hepatic bed with increase in pressures in the portal, splenic, mesenteric, and coronary vessels. When venous decompression occurs through the collateral vessels, esophageal varices result. This shunting of the portal blood decreases the nutrients which reach the liver by the portal circulation, increases the venous pressure in the upper intestinal tract and causes poor motility and probably inadequate absorption from this area. As portal hypertension continues a gradual transudation of fluid high in protein material occurs from the mesenteric venous system and ascites develops. The end result of this is the patient with poor nutrition, low proteins, esophageal varices, and eventually death due to either malnutrition, esophageal bleeding, or hepatic failure.

In the past, surgery of portal caval shunts was limited to those patients who had several episodes of esophageal bleeding and the presence of ascites was often cited as a contraindication. It is our feeling that the patient with portal hypertension due to cirrhosis should be considered as a candidate for surgery and a shunting procedure once the diagnosis has been established. The presence of cirrhosis with or without esophageal varices, but with ascites indicates portal hypertension. A diagnosis of cirrhosis can be made by liver function studies as well as a punch biopsy of the liver. We consider it fortunate that some patients do not develop esophageal varices early in their disease but may have ascites instead. A side-to-side portal caval shunt is the procedure of choice in this condition which by decompressing the portal circulation and hepatic venous bed, significantly reduces the ascitic fluid formation and prevents esophageal varices from occurring. Three cases are presented supporting this point of view.

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Thinning Hair in Young Women

Young women whose hair suddenly begins to fall out need have no fear they will be left looking like actor Yul Brynner.

Drs. William B. Guy and Walter F. Edmundson of Pittsburgh, writing in the February Archives of Dermatology published by the American Medical Association, said the condition is most likely temporary and can be treated successfully.

They said diffuse cyclic hair loss in women is "rather common" and is entirely different from permanent hair thinning that occasionally occurs in women in middle or late life.

"It occurs in transitory episodes, lasting for several weeks usually. The typical patient is a vigorous otherwise healthy woman.

"Needless to say, the emotional overtones in this situation are great. Some men take the state of their hair seriously. Practically all women do.

"It is the source of much perplexity because there is no apparent cause.

"It is probably a physiologic phenomenon. In these people a significant per cent of hairs enter the resting phase simultaneously. When they fall out in a short period of time, the situation causes alarm."

The authors said the hair that falls out usually is replaced by new hair growth. They said they had been able to arrest the process by administering corticosteroid hormones.

Immuno-Pancreatitis

A Preliminary Report

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Acute and recurring attacks of pancreatitis may be caused by food allergy and attacks may be prevented by eliminating the offending food from the diet. It is well to consider this possibility when dealing with this distressing condition.

THE QUESTION of antigenic pancreatitis, as well as that of the broader question of gastrointestinal allergy, is often disputed and frequently difficult of proof;[1,2,3,4,5,6,7,16,18,21,23,25,26,28] yet that it does occur is without question. There have been relatively few reports dealing with allergy of the abdominal organs, probably largely because of their inaccessibility.[16] Interest is therefore naturally aroused as to the seat of the allergic processes and the nature of the reactions.

The exact measurement of allergic phenomena in general remains unknown, although certain facts about it are known. Antibodies, including anaphylactic antibodies, heterophile antibodies, atopic reagins and blocking antibodies are present in the blood of allergic individuals; however, available data do not reveal a constant association of a given antibody with the various allergic conditions. It would seem, then, that the mechanism of allergy cannot be precisely correlated with the antibodies which have been detected to date.[28] Thus, it would appear that allergy can be adduced as the cause of pancreatitis when an altered reactivity of pancreatic tissue can be demonstrated by the induction of one or more allergens.

Read before the Richmond Academy of Medicine.

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CASE REPORT

University of Pennsylvania Graduate Hospital Case Number 236222: 19 year old white female high school student was admitted to the hospital on 12-28-54 because of recurrent attacks of epigastric pain, and was discharged 1-24-55.

Since May 1953, she had been admitted to a neighboring hospital on four separate occasions because of recurrent epigastric pains. The attacks occurred episodically, varying in duration from one week to one month. The present episode began fifteen minutes postprandially 12-17-54, and was associated with a throbbing vertex headache which later localized bitemporally. There was no nausea or vomiting on this occasion; however, all other episodes had had concomitant nausea and vomiting. Vomitus contained bile colored fluid and sometimes recently ingested food particles. The pains were described as cramping or burning in nature, and usually began in the epigastrium with radiation to the left costal margin and left costovertebral angle. Gaseousness and sour eructations were experienced with the pain. There was no relief from changing the position of the body, or from ingestion of Gelusil. Most attacks occurred within thirty minutes after eating provocative foods.

She took three enteric coated pancreatin tablets t.i.d., from August to November 1954 and was asymptomatic for this period of time. She gained thirteen pounds, but had lost most of that during the two weeks prior to this hospitalization. Terramycin was taken in varying amounts with six of her attacks, with apparent relief, and four weeks prior to the present admission she took twenty-four tablets of Terramycin, and again repeated this medication in the week immediately preceding admission.

Until the age of sixteen, she passed four or five large stools daily but since had had only one evacuation daily.

Studies elsewhere had revealed negative cystoscopy, normal retrograde urogram, normally functioning gallbladder without evidence of calculi, normal barium enema, negative flat abdominal film during an attack of pain, several negative studies of the stomach and duodenum.

A progress meal study, however, showed segmentation and flocculation of barium suggesting disordered motor physiology. On two occasions the serum amylase was reported to be 225 mgm.%, but on both occasions blood was drawn on a day when Demerol had been given (50 mgm.). A stool specimen showed slight increase in total fat content.

Past Medical History

The patient was adopted at the age of ten days. At one month of age, the patient had difficulty with her formula and vomited frequently until four months old when Knox gelatin was substituted and seemed to give improvement. She apparently was always rather "sickly" and gained weight poorly as a child. At four years of age, she received a battery of skin tests and "was found to be allergic to many substances". Up to ten years of age, she had been subject to frequent "colds", with tightness in the throat and nasal stuffiness, and had several episodes of "pneumonitis" with an apparent predilection for the right side of her chest. Whenever dogs would come near her, she experienced periorbital edema, rhinorrhea, and would develop a rash. Appendectomy was performed at twelve years of age because of symptomatology very similar to that of the present illness. The appendix was not acute but she had no recurrence of symptoms for five years. There was no history of childhood eczema, hay fever or asthma. Diarrhea was promptly experienced as a baby upon ingestion of pureed peas and lentils. Itching and vomiting were experienced after ingesting veal and pork.

Physical Examination

The abdomen was flat with a right lower quadrant McBurney's scar which was freely movable and nontender. Tenderness was elicited in the epigastrium toward the left end in the left costovertebral angle. Bowel sounds were hyperactive but of normal quality. No organs or masses were palpable. The remainder of the examination was not remarkable.

Laboratory Studies

Red Cell Count	4,350,000	
Hemoglobin	12.5 grams	
White Cell Count	12,400-7,700	
Neutrophiles	64%	46%
Lymphocytes	30%	38%
Monocytes	2%	8%
Eosinophiles	4%	8%
Prothrombin Time	15 seconds/100%	
Sedimentation Rate	8 m.m./hr.	
F.B.S.	85 mgm.%	

Oral Glucose Tolerance Test:		Starch Tolerance Tests:
Fasting	96 mgm.%	80 mgm.%
1/2 hour	158 mgm.%	97 mgm.%
1 hour	98 mgm.%	89 mgm.%
2 hours	68 mgm.%	75 mgm.%
3 hours	63 mgm.%	81 mgm.%

Serum Amylase 75 mgm.% —400—290—88—99 —320—107

Serum Lipase—0.22—0.61—0.99—1.28—1.0 ccs.

Serum Proteins	6.3 grams %
Albumin	3.7 grams %
Globulin	2.6 grams %
B.U.N,	10 mgm.%
Calcium	9.8 mgm.%
Serum Bilirubin	0.28/0.72 mgm.%

Urinalyses Specific Gravity 1.007, 25 neutral or acid reactions, albumin and sugar negative, sediment negative.

Stool Occult Blood 3+, 4+

Stool Balance Study:

Fat	5.1 gms./3 days
Nitrogen	2.1 gms./3 days
Total wet weight	255 gms.
Total dry weight	44 gms.
Fat content	15.1% of dry weight

Secretin test (80 units I.V.)—Duodenal drainage

Time	*Volume*	*Icterus Index*	*CO2*
0-10 mins.	37 ccs.	250	90 mEq/L
10-20 mins.	10 ccs.	225	95 mEq/L
20-40 mins.	30 ccs.	200	90 mEq/L
40-60 mins.	23 ccs.	250	65 mEq/L
Total	100 ccs.		

Secretin test—Serum Enzymes

Fasting: Amylase 114 mgm.% Lipase 0.53 ccs.

1 hour Amylase 105 mgm.% Lipase 1.14 ccs.

Gastric Analysis: (Ewald test meal) revealed no

free acid in one hour although the total acid reached 27 units at 45 minutes. Bile was present in all specimens. Histalog (50 mgm.) was then given I.M. and within 10 minutes the patient felt a flush and onset of a headache. 20 clinical units of total acid were detected after the administration of Histalog.

X-rays of chest and abdomen were essentially negative. Barium progress meal study showed no abnormality of the esophagus, stomach or duodenum. There was a slight fragmentation throughout the small intestine. The terminal ileum was negative. These changes were ascribed to a disordered motor function but were also considered consistent with the malabsorption syndrome.

Hospital Course

About mid-morning 1-4-55, the patient experienced burning epigastric pains, radiating to the left costal margin and left costovertebral angle. Examination revealed deep left epigastric tenderness, with an area of tympany in the left lower chest and left upper quadrant. No succussion splash was demonstrable and bowel sounds were not remarkable. Blood studies at that time showed a rise in eosinophile count from 4% to 8%. The serum amylase had risen to 400 mgm.% but the lipase remained within normal limits (0.61 ccs.). Urinalysis at the time of this attack was essentially negative. The following day, the fasting serum amylase level was 290 mgm.%. No opiate was administered in relation to this attack. She was treated for pancreatitis by a regimen permitting nothing by mouth, parenteral fluids and electrolytes, Pro-Banthine 15 mgm. every four hours, Gelusil two teaspoonfuls hourly, and hypodermic sodium phenobarbital. This attack continued in varying intensity for three days with gradual subsidence. On the afternoon of 1-6-55, the patient was given four minims of Adrenalin. She experienced tachycardia and palpitations, but soon thereafter was relieved of her symptoms. Serum amylase had already returned to normal limits the afternoon before. On the same evening after the Adrenalin, however, she noted swelling of her hands, and, two hours later, itching of the legs. At this time the possibility of food hypersensitiveness playing a role in the production of her pancreatitis was first considered. Consequently, skin tests for foods, inhalants, and pollen were performed. These revealed strongly positive tests for lima beans, navy beans and suspicious reactions for cauliflower, oysters, egg white, almond, sweet potato, apricot, cashew nut, cotton and house dust. On 1-18-55, a progress meal study was carried out with the barium mixed with chocolate, veal, and lima bean puree as a provocative test. Gastric stasis was noted for three hours, compared with the stomach being empty in one hour previously. The small bowel pattern was essentially unchanged but the patient experienced pain in the umbilical area, with tenderness one half hour after ingestion of the meal. This pain continued until the following day and was associated with itching of the face. The amylase and lipase values were as follows:

Date	Meal	Amylase (mgm.%) Fasting	Amylase (mgm.%) 4 hours	Lipase (ccs.) Fasting	Lipase (ccs.) 4 hours
1-18-55	Barium with veal, chocolate and lima beans	99	320	1.0	—
1-21-55	Veal	91	49	1.1	0.77
1-22-55	Chocolate	55	71	0.48	1.1
1-24-55	Lima beans	72	85	0.62	0.79

In the period between the attacks, which began on 1-4-55 and with subsequent provocative meals, there were no spontaneous episodes of pancreatitis. During this period, she was given a gradual advance in an elimination type diet. Fat and fried foods were omitted from the menu.

The discharge diet was an elimination type and permitted lamb as the only meat initially. Strict avoidance was to be made of all foods in the lentil group, eggs, chocolate, seafoods, gravies, fried foods, orange and pastry. In addition she was given six tablets of triple strength pancreatin with each meal. In the event of, or return of, abdominal pain, nausea, diarrhea, itching, skin rash, nasal stuffiness, etc., she was to record where she had been the previous eight hours and to list all foods ingested the two previous meals.

DISCUSSION

Ivy and Gibbs[2] feel that acute pancreatitis is a relatively common disease which may manifest mild edema without symptoms, or range to a generalized fulminating necrosis with marked pain, shock and, eventually, death. A comprehensive analysis of the possible etiological factors of acute pancreatitis by these same authors lists allergy as a cause of pancreatitis.[10,11,12,13,15]

Some felt that a pancreatic external secretion deficiency, or a surpassing of the pancreatic threshold by excessive total food intake, tends to cause food allergy, and that ingestion of whole active pancreatic extract should overcome this tendency. Markel[15] attributes this deficiency of pancreatic external secretion to "a complicating pathological disturbance of acini following mumps".[30] Boldyreff is generally

accredited as the first to observe, on dogs, that pancreatic enzymes are absorbed from the duodenum into the blood stream.[16,17,18] Walzer reported that the presence of small quantities of protein, sufficiently whole to be identified, are regularly found during digestion, and that these are absorbed into the blood stream. Further, he concluded that in allergic individuals it is the appearance of these whole proteins which produce the allergic phenomenon.

The major allergic phenomena are probably due to release of histamine, or histamine-like substances, into the circulation consequent upon the union of antigens and antibodies. Following this premise, Rodrigues-Olleros[23] was able to experimentally produce pancreatitis in a series of dogs by intravenously injecting histamine. Edema, hyperemia, and hypersecretion of the pancreas were noted. Courelaine and Borgetan[25] sensitized dogs to horse serum by intravenous injection, and then reinjected the serum into the duodenopancreatic vein and directly into the pancreas. Pancreatic edema became apparent at once. Serosanguineous fluid was found in the peritoneal cavity when the animals were sacrificed the next day, and there was evidence of omental fatty necrosis. In addition, the pancreas was edematous and contained many hemorrhagic areas. Maragliano[16] and Bezza[21] have also reported rather similar findings in experimental allergic pancreatitis.

Two recently observed cases of pancreatitis[41] were presumably of allergic origin; however, the question of morphine administration in relation to abdominal pains and the serum amylase levels is not clear. Both patients are said to have developed pancreatitis after ingesting apple and chocolate, both of which had produced abdominal distress previously. Shaffer[1] described a case of allergic pancreatitis, associated with generalized urticaria, which was "completely relieved" by administration of antihistamine.

DIAGNOSIS AND TREATMENT

Since it is rather common knowledge that food hypersensitiveness may occur in the absence of reagins and, therefore, may yield negative skin reactions to the offending allergen, the clinician must rely on other means than skin testing for detecting the etiological agent. An adequate history of possible offending foodstuffs is imperative, even though many suspected foods may have been eliminated from the diet anyway. Whether this is true or not, a food diary is invaluable. This is followed with an elimination diet, beginning with a simple basic diet and gradually adding foods to it. The offending food or foods should be detectable and given to the patient to reproduce the symptoms and signs—and then removed from the diet with a relief of symptoms and signs. This should be repeated several times so as to definitely identify the offending agent.[19,28] Barium studies, with and without the offending foodstuff blended in, may be employed to confirm the diagnosis; serial serum amylases and lipases should also be drawn concurrently with the barium studies, both in the fasting state and at intervals during and after the barium study. Elevated pancreatic enzymes, abdominal pains, and the roentgen pattern of hypermotility of the barium meal through the small intestine (reaching the cecum in one hour or less), segmentation or clumping of barium, slow gastric empyting and hypermotility where the lumen has been diminished may be found singly or all together in such a study. Treatment is avoidance of the offending allergens. Adrenalin, antihistamines, vagus inhibiting drugs, phenobarbital, nitrates and aminophylline may all be used to advantage. Because of the tendency to produce spasm of the sphincter of Oddis, morphine given alone is considered inadvisable. Morphine may sometimes be necessary to control pain, however, for, as yet, there is no satisfactory substitute.[36] Blocking the paravertebral sympathetic nerve fibers carrying pain afferents from the pancreas may be helpful in relieving the acute phase of the pain; however, this may be more useful as a therapeutic tool in later stages of chronic relapsing pancreatitis. Relief of any dehydration or electrolyte imbalance, along with other supportive measures, are also indicated.

SUMMARY

Antigenic pancreatitis is seen clinically, and may be experimentally produced in animals. Food hypersensitiveness, especially chocolate, nuts, seafood and milk, seems to be the chief etiological agent in this condition.

A case illustrating antigenic pancreatitis has been presented.

More information as to the basic nature of the processes involved is needed, and still further investigation of this little explored field should offer rich returns.

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The Problem of Hiatus Hernia

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Hiatus hernia is often overlooked. Even after it is found, it is often difficult to make an accurate evaluation of its role in producing a group of symptoms.

HIATUS HERNIA presents a problem in diagnosis and treatment that engages the attention of many physicians. The general practitioner, the internist, the gastroenterologist, the cardiologist, the surgeon, the hematologist, and the endoscopist are all concerned with the problem. About five per cent of those patients having an upper gastrointestinal x-ray examination have a hiatus hernia.[1] There has been no dearth of recent literature on the subject. However, most of the articles have presented only one phase of the problem or described results in one or more forms of treatment.[2] There has not been a recent article approaching the problem from a broad viewpoint with the proper appreciation for the diagnostic and therapeutic frustration it can cause.

Accordingly, it seems worthwhile to relate the experience of one who has seen personally the vagaries of the condition in forty private office and hospital patients collected between January, 1950, and the fall of 1959. It is acknowledged that no great statistical significance can be put on such a small series collected from among the general run of internal medical patients. It is also true that available statistics have not been of great help in treating some of the patients reported on below. All but four were diagnosed while under my care and, in my role of "family" internist, I have treated them for hernia or other symptoms an average of three and a half years. In some, an accurate diagnosis was not made as soon as it should have been because it was not considered. Various forms of treatment have been used with varying degrees of success.

From the Roanoke Valley Medical Clinic.

CLASSIFICATION AND PATHOGENESIS

Hiatus hernias are of two types: paraesophageal and sliding. In the first type, a knuckle of the fundus of the stomach herniates above the hiatus beside the esophagus. The esophago-gastric opening is usually below the diaphragm. In the second, the cardia of the stomach lies above the diaphragm.

The symptoms in many instances, it would appear, are due to altered pressure relationships and not to stricture, erosion, or esophagitis. In support of this theory, which has not been suggested in the literature or shown experimentally, would be the acute suddenness with which a feeling of pressure in the chest can occur after eating and be relieved just as abruptly. Surely, esophagitis does not become cured in a matter of seconds.

Age, obesity, increased abdominal pressure, as in prostatism and pregnancy, have all been incriminated as important factors. In sixteen of the cases reported here, there was marked dorsal kyphosis although marked obesity was not present. It is mentioned often in the literature that bending over will often cause hernial distress. Perhaps chronic bending, as in kyphosis, has some causal relationship to the hernia.

As in herniae of other types, there is doubtless a congenital predisposition of the ligamentous structures to give way with the stresses of aging but this concept does not lend itself to proof. Trauma has been blamed for the subsequent development of hiatus hernia.

Finally, no one can say in a given instance why a hiatus hernia develops.

THE DIAGNOSIS

There are twenty-two women and eighteen men in the series. Eleven, or about one-fourth, were under fifty years of age. One was a twenty-one year old man. There was a tendency toward corpulency and none of the patients was asthenic in habitus. Only two, however, were grotesquely obese.

The symptoms are protean, variable and intermingled so that they often pose a diagnostic dilemma. They can be classified only generally. The patient may present himself with symptoms which mimic the digestive, cardiac, respiratory, hematologic or purely

functional disorders. He may come in with a mixture of symptoms which only continued observation, sometimes for many months, can elucidate.

The symptoms of hiatus hernia may be so severe as to seem a threat to life or so trivial that treatment is not necessary. The digestive symptoms are mostly those of obstruction or those frequently described lately as being due to peptic esophagitis. They may complicate other gastrointestinal diseases. Eleven of the forty complained that "food would not go all the way down," or that there was a distressing lump which formed at the level of the xiphoid, immediately after swallowing, which would be relieved either by "moving on down" or leaving the table and regurgitating. Such regurgitation was not attended by marked nausea and often the patients could return and eat a full meal. This obstructive symptom had not caused marked weight loss or impairment of health except in one patient. In this group, patients with marked pain are not included. It is believed that this symptom is almost diagnostic, is most easily confirmed radiologically and is of least importance as a health hazard. In a pure form, this lump-at-the-xiphoid syndrome was not aggravated by the supine position, a consideration which has perhaps been over-emphasized. Palmer found symptoms aggravated by recumbency in only 22 per cent whose symptoms were ascribed to hiatus hernia.[3]

Case 1 will illustrate this syndrome in extreme form. A sixty-seven year old, hypertensive, kyphotic woman had had a lump behind her xiphoid, immediately after swallowing, for years. Her eating resembled that of a puking baby—much work for little nourishment. She was embarrassed because she felt she had to eat alone and could not attend church suppers or eat in a restaurant. An operation was mentioned and she readily assented. A large paraesophageal hernia was repaired and she was able to attend church suppers again.

Esophageal pain has been described as burning, boring, frequently radiating into the back or throat, attended by nausea, often worse on reclining and varying from negligible to being so severe as to require opiates.[4] Seven patients in the present series had predominantly symptoms of this type. The main symptoms were mild and yielded to simple treatment but the diagnostic dilemna is illustrated by case 2.

This patient, a seventy-five year old, nervous woman developed epigastric pain in 1950. For years, she had been a finicky eater complaining of gas and heart burn. It was marked by radiation into chest, throat and accompanied by anorexia and weight loss. An upper gastrointestinal series was negative. A cholecystogram revealed a very poorly functioning gall bladder and a cholecystectomy was performed in 1952. Post operatively, she continued to have marked epigastric and burning esophageal pain and anorexia. She was very discontented with her surgery and, in an effort to ameliorate her severe symptoms, she was operated upon for the relief of her "post-cholecystectomy syndrome" in 1956. A sphincterotomy was performed since no other disease was evident. She had been referred by her family physician to a conservative surgeon who, in turn, referred her to me. She was a thin, aged woman, brow-beaten by her husband, and labeled as senile by her children. Thus the stage was set for diagnosing a functional disorder. After months of antispasmodics, sedatives, and antacids, she fell and fractured her hip in 1957. While convalescing, she had an exacerbation of her esophageal symptoms. Another gastrointestinal examination was made and this time a small hiatus hernia was discovered. This patient had had nearly ten years of misery, two major operations and is still not well. The probable cause for her symptoms could have been found earlier had she not had gall bladder disease and, more important, if the esophageal symptoms of hiatus hernia had been fully appreciated.

As shown above, the correct evaluation of atypical symptoms of other diseases may point a shadowy finger to hiatus hernia. This is important because the hernia symptoms frequently occur with other digestive conditions. Two patients had concomitant gall bladder disease. Seven had peptic ulcers of stomach or duodenum. Two had an esophageal diverticulum above the level of the hernia and in one of these a peptic ulcer was found in the herniated portion of the stomach.

The compounding of symptoms and the confounding of the diagnosis can be illustrated by a fifty-eight year old illiterate man who was first seen with a mild case of broncho-pneumonia who was treated as an out-patient. On his return visit, he complained of vague hurting beneath his ribs and in his epigastrium and the inability to eat without vomiting. He was decidedly tender in the right upper abdominal quadrant and cholecystography revealed a non-functioning gall bladder which could account for all his symptoms. However, since he was having marked regurgitation, a gastrointestinal series was done which nicely demonstrated a hiatus hernia. Thus, failure to explain all the symptoms did not result in the treatment failure as described in case 2. A

cholecystectomy and repair of the hernia were accomplished with difficulty in one abdominal operation.

It would appear that the proper appraisal of symptoms referable to esophagus, heart, stomach, duodenum, or gall bladder should, so far as possible, rule out a hiatus hernia. To put it another way, since twelve of the forty of these patients had other digestive or heart disease, it is well not to blame the hernia symptoms on more prevalent and more easily demonstrated conditions.

It is well established that a hiatus hernia can cause symptoms indistinguishable from coronary insufficiency. It is equally well established that hernia and coronary disease can co-exist, making appraisal of either condition difficult or impossible. In this series, there were eleven patients who would have abrupt attacks of retrosternal crushing pain not related to eating. The pain could be so intense as to cause prostration. It would not infrequently radiate into the neck or the left arm. In this series, however, none have resulted in shock or marked tachycardia.

Case 4 illustrates the myocardial infarction syndrome of hiatus hernia. A fifty-eight year old physician was seen at his home about 11:00 P.M. He was moaning with pain, clutching his chest, sighing for breath, and perspiring profusely. Intermittently, he gagged but could not vomit. He did not get relief from 12 mgs. of morphine and was then hospitalized. He was placed in an oxygen tent and finally became comfortable after another dose of morphine. Several electrocardiograms were negative. After twelve hours, he was comfortable. After thirty-six hours, a G.I. series revealed a small hiatus hernia. He has lived eight years since this episode and has no cardiac disease.

Hiatus hernia may mimic milder forms of coronary disease. A fifty-eight year old machinist complained of retrosternal pain when he straightened up from his work and walked fifty yards. The symptoms had been present three weeks and occurred almost daily. The pain was indistinguishable in character from angina pectoris and this diagnosis was made although an electrocardiogram was normal. He was advised to stay at home and rest for two weeks in anticipation of a myocardial infarction. When he returned, he complained of mild indigestion and a G.I. series revealed a very large hiatus hernia and a deformed duodenal cap. An EKG was still normal. On modified ulcer regimen, he has remained well. This case illustrates one strong differential point in distinguishing coronary disease and hiatus hernia: angina pectoris is usually consistent; hiatus hernia is bafflingly inconsistent.

Case 5 illustrates the confusion of co-existent coronary disease and hiatus hernia. This sixty-four year old diabetic woman complained of "upset stomach" in early 1957. She had much belching and sour stomach, with occasional mild nausea. A G.I. series was negative. Two months later, after eating a full meal in a large restaurant where she had walked from a parking lot and climbed a long flight of stairs, she was stricken with severe retrosternal pain radiating into the left arm. She was carried to the hospital via ambulance and treated as a case of myocardial infarction. An electrocardiogram was consistent with the diagnosis. She made a good recovery and has remained relatively well though she still has indigestion. An electrocardiogram remains abnormal but a G.I. series, in May, 1959, revealed a hiatus hernia. She can precipitate chest pain by exertion and still be relieved by nitroglycerin. She is unable to distinguish between the chest pain that comes after eating and that coming after exertion.

Case 6, a seventy-eight year old woman had "heart disease" for twenty years after an attack of infarction syndrome. She had never been truly disabled but she would have attacks of chest pain and dyspnea at night every year or two. Finally, she had a G.I. series which revealed a large hiatus hernia. Digitalis which nauseated her was discontinued, a left phrenic resection was done and she was much improved. Her electrocardigram revealed no marked abnormality. Three "cardiac" cases demonstrate the importance of always considering hiatus hernia in dealing with chest pain. One can only imagine the number of people with hernias who have been misdiagnosed as having coronary disease. One can but speculate on the number of people with cardiac disease whose symptoms are difficult to appraise because a hiatus hernia is unsuspected.

Respiratory symptoms have not presented themselves with any purity in this series. Case 6, above, is described as resembling an attack of paroxysmal nocturnal dyspnea. Several cases of lump at the xiphoid patients stated that it felt as if something "cut off the breath" temporarily but this was not particularly distressing.

Another group of patients pose a special problem that may occasionally be a challenge to the hematologist. Case 7 is such a patient. She was seventy years old and was first seen in 1954 in the hospital where she had been placed for treatment of labyrin-

thitis. Three years previously, she was found to be anemic and was given several blood transfusions. Subsequently, she had been given liver injections, vitamins, and iron but the anemia remained. When first seen, the hemoglobin was 7.5 grams. Gastric analysis revealed no free hydrochloric acid after histamine stimulation. A G.I. series revealed a "very small amount of the gastric mucosa had slipped through the esophageal hiatus producting a hiatus hernia about 2 or 3 centimeters in diameter." Her weakness and anemia again became pronounced and she was hospitalized in May, 1955. A bone marrow examination revealed marked hyperplasia of the erythroid elements. Later, in 1955, she was hospitalized at a University Medical Center where the marrow was reported as very cellular, suggesting chronic blood loss. No other cause for anemia has been found. The fact is that she is still anemic and still going at the age of seventy-six with hematologic findings about as they were six years ago.

Only after several years would one suggest that her anemia, varying between 5 and 10 grams of hemoglobin, was due to bleeding from the hernia. Marked hypochromia and rare early red cells in the peripheral blood and a barely palpable spleen persist. The enlarged spleen is not incompatible with chronic blood loss according to Wintrobe.[5]

The dilemma of diagnosis is presented nowhere more nebulously than in the frank neurotic. Case 8 was a fifty year old, hysterical women first seen in 1951. She had had her left kidney, the gall bladder, and the uterus removed. She had had two laparotomies for adhesions. She had classic hysterical bloating as described by Alvarez. She would have attacks of vomiting and severe epigastric pain, suggestive of gall stone colic. Finally, in 1957, a G.I. series revealed a small inconstant hiatus hernia. She is considered beyond surgical redemption at this time. One can but wonder if she may have had a happier life had her hernia been demonstrated thirty years ago.

I agree with Palmer[3] who poignantly sized up the matter when he stated, "What is needed is a broad clinical formula to permit identification, not of patients with hiatus hernia—for that would be missing the point—but rather of patients with hiatus hernia whose troubles are due to hiatus hernia." In his study of 214 patients, "more than one-third had apparently never had symptoms attributable to hiatus hernia".

Case 9 presents an interesting point. This patient was sixty-one, markedly kyphotic with osteoporosis of the spine. She complained of vague chest pain and indigestion with some regurgitation. She presented herself to a thoracic surgeon. A G.I. series revealed a hiatus hernia and she was operated upon, without relief. She became hostile to her surgeon and hostile to me when I could not offer her immediate relief. When last heard from, she was receiving chiropractic consolation which will give more comfort than her thorocotomy.

These cases are outstanding examples of the problems presented by hiatus herniae. At best, the physician can think of the condition, look for it, appraise it, fit it in with the symptoms, call in all the help he can find from radiologist to endoscopist, and pray he will be right.

TABLE I

Prominent Symptoms in Forty Cases of Hiatus Hernia

"Xiphoid lump"	11 patients
"Esophagitis"	7 patients
"Coronary"	11 patients
"Ulcer"	11 patients
"Anemia"	4 patients
"Functional Indigestion"	14 patients

TABLE II

Concomitant Disease in Forty Cases of Hiatus Hernia

Duodenal ulcer	6 patients
Gastric ulcer	2 patients*
Gall bladder disease	2 patients
Esophageal Diverticulum	2 patients
Symptomatic heart disease	3 patients

*1 patient had gastric and duodenal ulceration.

It is not the purpose of this report to assume any radiological burden but, since the objective diagnosis most often is by x-ray, certain consideration must be taken into account. Not all hernias are demonstrable even by contortions particularly favored by one or another radiologist; not all the hernias found are symptomatic. Some favor a right anterior oblique position, some a left oblique Trendelenburg, some a right oblique prone position, with or without abdominal pressure. One author believes that supine straight leg raising has particular merit. The point seems to be that they are best demonstrated in the position in which the examiner takes the best look. The right oblique prone position, with use of a radiolucent cushion as advocated by Wolf and Guglielmo[6] seems to have particular merit. In this series, the radiologic diagnosis was made by myself in twenty-seven of the cases. As Palmer[7] has pointed out, "the radiologist is not able to detect the junction between the esophageal and gastric mucosa and must render his opinion

on the basis of the number and configuration of the regional mucosal folds, plus the point of sudden increase in the tube's diameter". In any event, the literature indicates they are easily missed. Case 10 is that of a fifty-four year old man who had "sour belches" and intermittent, severe, left chest pain for fifteen years. He had been x-rayed five times, by myself and others, including once at a University Medical Center. Finally, I was able to see a small paraesophageal hernia which was subsequently repaired.

The finding of a hiatus hernia does not mean hernial disease but, where symptoms are highly suggestive, it is worthwhile not to abandon the diagnosis because of a negative x-ray. An occasional hernia will be found by a routine film of the filled esophagus which can be done without special manipulation by having the technician give a swallow of barium about eight seconds before she takes routine stomach x-rays. My experience has been that when a hernia was not demonstrable by the left posterior oblique or the right anterior oblique view, it was not demonstrable by the Trendelenburg position. Certainly, the management of a cup of barium in the dark by enfeebled patients is not easy even without lowering the head.

TREATMENT

The treatment of hiatus hernia poses certain problems. Surgeons are more concerned with eradication of the disease; the internist is concerned with a patient living comfortably with it, if possible. In general, the symptoms are not so severe as to be worth the price in inconvenience, risk and morbidity of a wide thoracotomy. The mortality of operation is about three per cent[8] and I have seen no statistics on the painful post-surgical chest which is a problem to the internist and general practitioner, if not to the surgeon.

Accordingly, a patient with a symptomatic hernia can be told that if his symptoms become severe enough, surgery probably can be of great help but that the surgery has certain hazards. Since the condition is seldom dangerous, the decision can be left to the patient. On this basis, three patients chose thoracotomy. Two of the three got a good result and were satisfied with the operation. One left town soon after the operation and no follow-up was available on her. It is interesting that all three of these cases has paraesophageal hernias, and chose operation. One lady got to the surgeon first and got an unhappy result from her thoracotomy.

Three other elderly ladies were treated by left phrenic resection which had had favorable reports as a paliative procedure.[9] Two had marked regurgitation and one had anemia of abrupt onset for which no other cause could be found. Such a mild procedure has as its purpose a relief of pressure on the stomach fundus and in enfeebled people certainly seems worthwhile. In these old ladies, a good result was promptly attained. They were all markedly kyphotic but in only one was mild dyspnea produced by the diaphragmatic paralysis.

The experience with surgery is related only to emphasize the fact that it is not often necessary. Some of the chest surgeons, nowadays, are becoming so concerned with the esophagitis, which has recently become fashionable, that they are overlooking the three per cent mortality of thoracotomy. Esophagitis is usually quite manageable medically and has an almost negligible mortality.

Seven had some surgical procedure—all of them still need antacids, antispasmodics, or a bland diet from time to time. The remaining thirty-three need antacids, antispasmodics, or a bland diet from time to time. This is not to knock surgery; it is to emphasize that the surgery is no panacea and should be reserved for those whose symptoms are severe enough for them to really be eager for it.

SUMMARY AND CONCLUSIONS

Hiatus hernia is a problem in diagnosis. It frequently mimics or co-exists with other illnesses. At times, its significance is difficult or impossible to appraise. Its presence can confuse; a delay in its diagnosis may lead up therapeutic blind alleys. It produces no symptoms or may produce severe symptoms and its treatment is symptomatic. These are the conclusions one arrives at after considering forty closely observed cases in private practice in the last nine and one-half years.

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Exhibit at University

The University of Virginia Medical School Library is exhibiting memorabilia of Dr. William M. Kerr (or Carr) who entered medical school at the University of Virginia in 1826, one of the first years of the Medical School. Dr. Robley Dunglison was his teacher in anatomy and medicine when only one year was required for graduation and no clinical study was available. Dr. Kerr had studied previously under Dr. John Floyd and at Hampden-Sydney. Dr. Floyd in addition to practicing medicine was a member of the General Assembly, served in Congress from Abingdon District, and from 1830-1834 was Governor of Virginia.

The exhibit shows two of the textbooks which Dr. Kerr used at the University of Virginia. One in Latin, "Medical Dissertations" by Archibald Pitcairne was printed in Rotterdam in 1701. The copy Dr. Kerr owned is initialed by the author and is inscribed to Pitcairne's father-in-law, Sir Archibald Stevenson of Edinburgh. Dr. Pitcairne was so famous in his day and had such a great library that, on his death, the library was bought by Peter the Great of Russia.

The other textbook shown is "The Family Female Physician, or a Treatise on the Management of Female Complaints, and of Children in Early Infancy" by Alexander Hamilton, M.D., Professor of Midwifery in the University of Edinburgh. This book is an American edition, printed in 1793 in Worcester, Massachusetts.

Dr. Kerr emigrated to Indiana in 1831 at 21 years of age to begin his practice of medicine in Dublin, Wayne County. He moved to New Castle after gaining a wide reputation as a physician during a cholera epidemic. His final home in Indiana, after his marriage, was painted in a butter bowl by some itinerant artist. This painted bowl is in the exhibit.

Also shown in a medical lamp intended for the burning of herbs to clear the atmosphere of "vapours". The small bronze statue on this lamp is Mercury with his emblem of the two serpents, the caduceus symbol which is used widely today by physicians. This rate lamp by the Florentine sculptor Giovanni Da Bologna (1524-1608) may also be seen in the Bargello Gallery in Florence, in a larger form.

Dr. Kerr was the great grandfather of Horace Burr of Carrsgrove who loaned this material for the exhibit. The exhibit will be up until early fall.

Aspirin Poisoning – $C_9H_8O_4$

SIDNEY KAYE, Ph.D.
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This is one of periodic articles on common poisonings which will be published in the Monthly from time to time. It is prepared by Dr. Kaye in collaboration with the Richmond Poison Information Center.

ASPIRIN is the most common poison in children between the ages of one to four. It is estimated that more than 100,000 cases are treated in the Emergency Room annually. Aspirin poisoning is especially deceptive in that the child does not always appear too sick in the early stages. Therefore, early recognition and treatment many times may make the difference of survival.

Synonyms: Acetyl salicylic acid, M. P. 137° C., MLD approximately 20 Gms./150 lb. man.

Derivatives: Sodium salicylate, MLD approximately 20 Gms.; Phenyl salicylate (salol), approximately MLD 5 Gms., M. P. 42° C.; Methyl salicylate (oil of wintergreen), approximately MLD 30 ml.; Salicylic acid, approximately MLD 8 Gms., M. P. 157° C.

Uses: Analgesic, antipyretic, antirheumatic.

Remarks: Salicylates are rapidly absorbed and usually can be detected in the urine within 30 minutes. Allergy is not uncommon, usual reaction produces uticaria, angioneurotic edema. The most serious outcome of overdosage is a profound acidosis.

Symptoms: Nausea, vomiting may be delayed; disturbance of hearing and vision, tinnitus. Large doses first stimulate and then depress the central nervous system; initial excitement and convulsions followed by stupor and depression. Central stimulation also produces hyperventilation and an early alkalemia, followed by a severe metabolic acidosis, cyanosis, sweating, thirst, bleeding gums, lowered prothrombin, peripheral vaso-dilatation, hyperpnea with dyspnea, renal and brain damage, weakness and fatigue, hypotension, irritability, delirium and confusion, respiratory failure, collapse, coma, death.

Identification:

(1) To 5 ml. of urine, add 1 ml. of 10% ferric chloride. (First gently heat the urine to rule out possible false reaction due to acetone bodies.) If salicylate is present, a purple color will appear. This test is very sensitive and is positive in urine even after the ingestion of one 0.3 gm. aspirin tablet. This test is also positive for sodium, phenyl or methyl salicylates, and phenol derivatives.

(2) Acidify 5 ml. of blood by adding 0.5 ml. of concentrated hydrochloric acid. Then extract with 10 ml. of ethylene dichloride. Allow layers to settle and separate. Discard upper blood layer, and add 2 ml. of 0.2% ferric nitrate to the ethylene dichloride. A purple color results if salicylate is present. The color can be compared with standards similarly prepared or may be read in a spectrophotometer.

(3) Benedicts' reagent —> positive test for sugar in urine.

(4) Pure crystals can be differentiated with ferric chloride (10%) (1 ml.).

Antipyrine + ferric chloride —> red color.

Salicylate + ferric chloride —> deep violet color.

Amidopyrine (pyramidon) + ferric chloride —> fading light violet color.

Methyl salicylate + ferric chloride —> violet color. (Add alcohol to dissolve methyl salicylate.)

Phenyl salicylate (salol) + ferric chloride —> violet color. (Add alcohol to dissolve phenyl salicylate.)

Phenothiazine + ferric chloride —> lilac color.

(5) Spectrophotometric, Ultraviolet spectra; maximum density; 300 mu. Minimum density; 265 mu.

NOTE: Can be detected in the urine within one hour after ingestion and usually can still be found up to 24 hours or more depending upon quantities taken.

Treatment: Gastric lavage with warm water. Do *not omit* lavage or emesis unless dose is known to be small, or exposure was a *very* long time ago. Patient may appear deceptively well when first seen. Signs and symptoms may be delayed several hours. Vomiting is stimulated centrally and may be delayed.

Fluids, oral or parenteral, to increase urinary output, and to counteract dehydration due to vomiting and sweating. Maintain body heat, fluids, and electrolyte balance. Keep warm and quiet. Alkaline drinks.

Sodium bicarbonate or sodium lactate IV, M/6 to combat acidosis and sodium loss. Periodic blood determinations for alkaline reserve will estimate severity of poisoning and progress of treatment.

Vitamin K derivatives and ascorbic acid for low prothrombin and capillary fragility.

In severe poisoning, an exchange transfusion for children; or hemodialysis (artificial kidney) may prove effective.

Sedation for restlessness. Morphine derivatives are contraindicated! Oxygen and artificial respiration if needed.

Office of Chief Medical Examiner
State Health Department
Richmond, Virginia

Drug Aids Victims of Parkinson's Disease

Tolbutamide, a drug customarily prescribed only for diabetics, has been used with surprisingly good results in the treatment of Parkinson's disease by two physicians.

Writing in the March 26th Journal of the American Medical Association, Drs. Edwin W. Gates, Niagara Falls, N.Y., and Irving Hyman, Buffalo, N.Y., told how the drug had helped 15 persons with Parkinson's disease.

The disease attacks the nervous system causing a stooped posture, stiffness and slowness of movement, rigidity of facial expression, and a tremor of the limbs.

"In some patients there was a decrease in tremor, and in others the most marked effect was the lessening of the rigidity. Most of the patients given tolbutamide were benefited to the extent that they required less care and could perform many more daily living tasks."

The two physicians began using the drug to treat patients with Parkinson's disease after one of them noted a marked decrease in the tremor of the hands and fingers of a 57-year-old diabetic given tolbutamide in 1958.

There is no known cure for Parkinson's disease. Antispasmodic drugs are the usual treatment to alleviate the symptoms. Tolbutamide is a synthetic hypoglycemic agent which lowers the blood sugar level.

The physicians said the significance of their findings is not clearly understood and further research is needed.

Tobacco and Renal Function and Diseases of the Urinary Tract

A Review of the Effects of Smoking and Nicotine Administration in Man and Animals [1,2,3]

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A comprehensive review of the effects of tobacco on renal function in man and animals.

A SURVEY of the world-literature on tobacco has failed to discover any comprehensive review of the effects of smoking on renal function or of the relationship of tobacco to diseases of the urinary tract. This same survey has also pointed up the relative paucity of observations of the effects of nicotine on renal and urinary-tract function in experimental animals; so that a review of the subject at this time may well serve the double purpose of indicating what is known, and what it would be desirable to know. We shall preface our account of clinical investigations and epidemiological surveys on man by a brief summary of the reported effects on the urinary system of animals of acute and chronic tobacco and nicotine administration.

[As used in this review, the term "tobacco" includes all of its preparations as well—tobacco-smoke, nicotine, etc.]

EFFECT OF TOBACCO ON THE MECHANISMS OF RENAL SECRETION IN ANIMALS

Opinion is virtually unanimous that nicotine, tobacco-smoke, or tobacco-smoke solutions cause vasoconstriction in isolated or *in-situ* kidneys; this has been reported for the isolated perfused kidney (Mosso, 1874; Romm & Kuschnir, 1928; Yokoyama, 1938, 1938-39; among others); in the kidney of the dog isolated except for its nervous connections (Sacchetto & Wittine, 1927; Sacchetto & Martinelli, 1927); in the kidney of dogs cross-anastomosed to the circulation of donor animals (Tournade & Malmejac, 1930, 1933); and in the organ *in situ* with circulation and nervous connections intact (Wertheimer & Colas, 1891; Moore & Row, 1898; Marshall & Kolls, 1917, 1919; Gotsev, 1936, 1937, 1940, 1943; Bariéty & Kohler, 1939; Fleig & de Visme, 1907a, b; Tournade & Malmejac, 1930; Roffo & Ramirez, 1932).

It is well known that one of the effects of nicotine administration in animals is a considerable increase in systemic blood pressure. According to Claude Bernard (1857), Werber had reported a diuretic effect of nicotine as a result of its pressor action, and Claude Bernard himself agreed that this would be a reasonable consequence of increase in blood pressure. E. Fischer (1944) studied the effect of nicotine on urine secretion rate in anesthetized dogs, and calculated that the dose which would produce 50% of the maximal possible pressor and diuretic effects was about the same; and J. H. Burn, Truelove & I. Burn (1945) found that hydrated rats given subcutaneous injections of nicotine showed a larger diuresis than the controls during the first 15 minutes after injection, and these workers considered the initial increase in urine excertion to be due to a rise in blood pressure caused by nicotine. E. K. Marshall & Kolls (1917, 1919) concluded from experiments on dogs that intravenous injection of nicotine paralyzed the ganglia of the fibers of the splanchnic nerve supply-

[1] From the Department of Pharmacology, Medical College of Virginia, Richmond.

[2] Supported by a grant from the Tobacco Industry Research Committee. We also wish to acknowledge the kind assistance of the Library of the American Tobacco Research Laboratory for obtaining for our review many of the articles cited in foreign publications.

[3] The material presented has been largely excerpted from a manuscript of a monograph currently in preparation in which the authors deal comprehensively with the world literature on all aspects, experimental and clinical, of the biologic effects of tobacco.

ing the renal vessels. This observation offers a possible, or at least a partial, explanation of the diuretic effect of nicotine. [However, painting the coeliac ganglion with nicotine in dogs and rabbits markedly reduced urine volume (Ellinger & Hirt, 1925).] That the diuretic effect cannot be attributed entirely to changes in blood pressure is evident from the experiments of Fischer (1944), who showed that the rate of urine formation (when this was moderate to begin with) in anesthetized dogs was increased by nicotine after the blood pressure had returned to normal levels from its initial rise; and after large doses of nicotine, this increased secretion lasted for more than half an hour.

The pressor effect of nicotine is due to general vasoconstriction, in which, as indicated above, the kidney participates; and this renal vasoconstriction results in an initial transient anuria (Marshall & Kolls, 1917, 1919). Creatinine-clearance studies performed by Maren (1951) showed a transient fall immediately after injection of nicotine, thought to correspond to a vascular effect during this period.

Fischer (1944) found that the renal effect of nicotine in anesthetized dogs was dependent on the functional state of the kidneys: for poorly-secreting kidneys, the effect was practically nil; if the kidneys were forming urine at a moderate rate, this rate was increased by nicotine; and when the kidneys were already performing maximal work (as in diuresis), the nicotine effect was more or less suppressed. The renal effect of nicotine was not distinctly influenced by anesthetics (Dial or ether). In rats, however, phenobarbital in high (130 mg./kg.) doses inhibited the nicotine-induced antidiuretic effect, but augmented the chloruretic effect, while urethane potentiated the antidiuretic effect, but did not influence the chloruresis (Supek & Eisen, 1953). Phenobarbital in lower (50 mg./kg.) doses had no statistically valid effect on the urine secretion of hydrated rats (Rosenblum, 1954). These results emphasize the importance of performing experiments on renal function on unanesthetized animals.

Pickford (1939) observed that when a water diuresis was produced in an atropinized dog, it was promptly inhibited by the intravenous injection of acetylcholine, and this inhibition no longer occurred after the posterior lobe of the pituitary had been removed. Since the action of acetylcholine occurred in the presence of atropine, it seemed likely that the effect was due to the nicotinic properties of the former drug; hence, J. H. Burn, Truelove & I. Burn (1945) studied the effect of nicotine and smoking on water diuresis; they found that adequate doses of nicotine inhibited diuresis in previously hydrated rats, and this observation has been amply confirmed (Maren, 1951; Pardoe & Weatherall, 1952; Supek & Eisen, 1953; Rosenblum, 1954; Fingl *et al.*, 1955; Bisset & Walker, 1957). Inhibition of water diuresis by nicotine was produced in renal-denervated rats as well as in intact animals (Fingl *et al.*, 1955), but not in hypophysectomized rats given daily injections of anterior-lobe extracts (Burn, Truelove, & Burn, 1945) or in neurohypophysectomized animals (Maren & Bodian, 1951). These latter observations indicate that the antidiuretic action of nicotine depends on the presence of the posterior lobe of the pituitary gland (Burn, Truelove, & Burn, 1945). Although, following administration of nicotine to hydrated rats, the time to reach a maximum rate of excretion was prolonged, the total volume of urine passed was increased in comparison with control animals (J. M. Walker, 1953). The antidiuretic action of nicotine in hydrated rats was not inhibited by ethanol (Fingl *et al.*, 1955; Bisset & Walker, 1957); chlorpromazine (Dasgupta & Hausler, 1955; de Wied & Jinks, 1958); hexamethonium (Walker, 1953; Bisset & Walker, 1957); pentamethonium, tetraethylammonium, diparcol, procaine, or atropine (Supex & Eisen, 1953); parpanit (Supek & Eisen, 1953; Rosenblum, 1954); Artane, diphenylhydantoin, mesantoin, paramethadione, or trimethadione (Rosenblum, 1954). Of the several anti-epileptic drugs tested by Rosenblum (1954), only phenacemide significantly antagonized nicotine antidiuresis. Nicotine also produced an antidiuresis in (presumably unanesthetized) dogs (Maren 1951; Dearborn, Lasagna & Marshall, 1952).

EFFECT OF NICOTINE ON THE COMPOSITION OF URINE

Marshall & Kolls (1917, 1919) stated that one of the most characteristic changes in the composition of the urine after section of the splanchnic nerve in dogs was an increase in chlorides excreted by the kidney on the operated side; but, after intravenous injection of nicotine, this discrepancy in the amounts of chloride eliminated by the two kidneys disappeared. In anesthetized dogs, nicotine caused increased urinary secretion without distinct changes in electrolyte concentration, but during water or caffeine diuresis, nicotine led to an increased electrolyte content of the urine (Fischer, 1944). The antidiuresis in hydrated rats given nicotine was accompanied by chloruresis (Supek & Eisen, 1953;

Bisset & Walker, 1957). The chloruresis might have been due to the release of oxytocin, since several workers have attributed the chloruretic effect of pituitary (posterior-lobe) extract to its oxytocic fraction (see Bisset & Walker, 1957).

Painting the coeliac ganglion with nicotine in dogs and rabbits markedly reduced urine volume and increased total nitrogen and uric acid (Ellinger & Hirt, 1925).

HISTOPATHOLOGY OF THE KIDNEY IN ACUTE AND CHRONIC POISONING

Esser & Kühn (1933) acutely poisoned three guineapigs with nicotine, and found a varying but distinct turbid swelling of the kidney epithelium, its degree dependent upon the time between the injection of the nicotine and death of the animal. The pathogenesis of these relatively uncomplicated acute effects would appear to merit further investigation. Nicotine is readily found in the urine of experimental animals following injection of the drug (Langley & Dickinson, 1890, among many others), and the proportion of administered nicotine excreted unchanged in the urine increases with increasing nicotine dosage (Finnegan, Larson & Haag, 1947); but, so far as the mechanism of urinary excretion of nicotine is concerned, the only published data appear to be those of Ozawa (1929, 1930), who reported that nicotine was eliminated from both glomeruli and tubules in the toad. Investigation of the site of nicotine excretion in the mammalian kidney, and factors affecting this, is greatly to be desired.

Histopathologic changes following chronic administration of tobacco or nicotine are both difficult to report and difficult to assess; the first difficulty is a matter of terminology, the second, of dosage. It appears to us sufficient to record which workers reported finding "pathological" changes in the kidneys of their experimental animals, and which workers found the kidneys to be essentially "normal". In the former category, kidney damage, specified or unspecified, was reported in some or all animals examined following chronic nicotine feeding in the dog (Favarger, 1906), chronic tobacco-infusion injections in the guineapig and rabbit (Benigni, 1911; Perazzi, 1912), and chronic tobacco-smoke exposure in mice (Essenberg, 1952; Venulet & Moskwa, 1952). According to other workers, the kidneys showed no pathological changes following chronic tobacco-infusion injection (Gouget, 1906: rabbit), chronic tobacco-smoke exposure (Schmiedl, 1913: rabbit; Küchle *et al.*, 1952a, b: rat), and chronic nicotine feeding (Wilson, McNaught & De Eds, 1938: rat) or nicotine injection (Nakasawa, 1931, 1933; Werle & Uschold, 1948: rat). It seems probable that too much importance should not be placed on either the "positive" or "negative" results, since it is apparent from a consideration of the entire Tobacco Literature that, if the dosage of tobacco or its derivatives in chronic experiments be too great, non-specific (e. g. nutritional) alterations will be brought about leading to a cachexial state and to general non-specific damage; while, on the other hand, if doses too small be employed, no tissue damage at all is demonstrable, which of course cannot be taken as evidence that no biochemical damage has resulted. Thus, the problem of dosage in chronic animal experiments such as the above, requires a great deal more thought and attention than the earlier workers, for example, have accorded it.

EFFECT OF TOBACCO ON WATER BALANCE

Burridge (1911) found that frog gastrocnemius muscles placed for 24 hours in nicotine-containing Ringer's solution gained 34-38% in weight; the weight gain was independent of nicotine concentration. Frog gastrocnemius dipped in hypotonic salt solution containing 5% nicotine swelled more than muscles dipped into the same fluid without nicotine (Lapicque, 1921). On the other hand, gastrocnemii contracted by 1:2000 nicotine imbibed a smaller amount of water, when immersed in distilled water, than did normal muscle (Gentile, 1934, 1935). The experimental conditions under which these three sets of experiments were performed, however, were so unlike that comparison of the results can scarcely be made. It is of interest to note that the increase in imbibition found by Lapicque was correlated with the decrease in chronaxie observed during the first phases of nicotine poisoning, and that curare, which increased the chronaxie of muscle, decreased its imbibition.

Frogs placed in tobacco-smoke solutions developed a toxic edema, their weight increasing 3-4-fold in 12-24 hours, with ultimate death (Moskwa, 1951). Injection of smoke solution into the lymph sac resulted in 1-2 minutes in marked edema of the viscera. As a result of daily intravenous injection of nicotine, two of five rabbits developed thick, edematous heads comparable to those produced in similar experiments by epinephrine (Leva, 1907). Tainter (1926) reported that paraphenylenediamine injected subcutaneously into rabbits or cats produced edema in

0.75-1.5 hours, and that this could be prevented in the majority of cases by subcutaneous or intravenous injection of nicotine. Other experiments led this worker to believe that the anti-edema effect of nicotine was primarily due to epinephrine secretion.

Injection of nicotine into anesthetized dogs invariably caused an intense secretion of lymph for 5-31 minutes, the increased rate of secretion reaching 500-1100% over control levels; the increased secretion was attributed to intensified peristalsis, increased blood pressure, and accelerated respiratory rate resulting from nicotine (Yaroslav *et al.*, 1940).

EFFECT OF NICOTINE ON THE URETER AND URINARY BLADDER

In a few experiments performed on chloralosed dogs, Bariéty & Kohler (1944) noted that nicotine given intravenously had inconclusive effects on the action of the ureter. Injection of nicotine into the region of the renal plexus of rabbits resulted in acceleration and/or intensification of ureteral peristalsis on the injected side in about 80% of the cases (Cohn, 1928).

Nicotine in a concentration of about 1:1000 stimulated the contractions and increased the tonus of segments and rings of excised pig ureters, while concentrations of about 1:500 paralyzed the contractions (Macht, 1916, 1917; Satani, 1919). Much more inconstant results were reported by Gruber (1927, 1928); in some instances, stimulation was observed, in others, depression of contractions, and in still others, no effect; stimulation was more often observed when the nicotine was added to the solution bathing the pace-maker. Occasionally, nicotine caused reversal of movement, while in a few cases, the drug induced rhythmical contractions in inactive muscles. The effect of nicotine on the motility of isolated pig ureters gradually decreased in going from the lower to the upper end of the ureter (Hasama, 1932); however, action-currents recorded from all portions of the ureters were comparable (Hasama, 1931, 1932). Normally, the currents were diphasic with a frequency of 2-8 per minute, and amplitude and rhythm were uniform in a given preparation. Following application of nicotine and independent of dosage, the action-current was initially increased, but after a time, the amplitude became reduced and simultaneously the frequency gradually decreased, until finally the current fluctuations completely stopped. Nicotine had either no effect or at best only a questionable stimulating one on longitudinal strips or circular sections of upper, middle, or lower thirds of excised dog ureter (Roth, 1917). On ganglion-free isolated human ureters, nicotine stimulated contractions, but further addition of the drug suppressed them (Hryntschak, 1925). The majority of the above workers (Macht, 1917; Satani, 1919; Hasama, 1932) assumed that the action of nicotine was on ganglionic structures in the ureter; but Hryntschak (1925) maintained that nicotine was a direct stimulant to the smooth muscle.

In rabbits, the urinary bladder was said to be unaffected by even large intravenous doses of nicotine (Nasse, 1865), but in the dog, intravenous injection of 10 mg. of nicotine caused marked contraction of the bladder (Henderson & Roepke, 1935), and in the cat, doses as low as 0.5 mg. caused a strong contraction (Truhart, 1869; Langley & Anderson, 1895; Dixon, 1903-04; Elliott, 1906-07; Langley, 1910, 1911-12; Edmunds & Roth, 1920); in the latter species, the contraction was followed by a very considerable relaxation. The effect of nicotine on the nervous control of the bladder has been studied by several workers (Elliott, 1906-07; Langley, 1911-12, 1918-19; Edmunds & Roth, 1920; Lee, 1935; Evans, 1936; Tournade, Chevillot & Bernot, 1938); and the results of such studies, in conjunction with observations in the intact animal of the nicotine effect following administration of atropine (Truhart, 1869; Langley, 1911-12; Edmunds & Roth, 1920), apocodeine (Dixon, 1903-04), and curare (Langley, 1910, 1911-12), and the effects of nicotine on the isolated bladder (Adler, 1918; Sakata, 1928; Lee, 1935; Imai, 1936, 1937; Shimada, 1938, 1939-40), have indicated that the mechanism of action of nicotine in producing contraction of the bladder is primarily by way of the nervous apparatus (Langley, 1910, 1911-12; Edmunds & Roth, 1920; Henderson & Roepke, 1935; Imai, 1936, 1937), although a direct effect of nicotine on the bladder musculature is also a possibility, especially with relatively large doses (Edmunds & Roth; Henderson & Roepke; Imai).

Stimulation of the sympathetic supply to the bladder of the cat at any point in its course produced a rise in the internal pressure of the bladder, followed usually by a fall of much greater extent than the original rise (Stewart, 1899). In some instances, the injection of nicotine seemed to affect the proportion between the rise and the fall. In the rabbit, intravenous injection of nicotine produced a temporary rise in vesicular pressure, followed by a fall (Uchigaki, 1927, 1929).

Truehart (1869) found that urination, which was

a consistent result of large doses of nicotine in cats, was absent in atropinized animals. Langley & Dickinson (1890) noted that brief micturition often occurred on injecting nicotine into rabbits, cats, and dogs.

No gross or histological changes in the urinary bladder were found in rats chronically exposed to tobacco-smoke (Küchle *et al.*, 1952).

We may note here that nicotine is rapidly absorbed from the urethra of rats, guineapigs, rabbits, and dogs (Macht, 1937-38, 1938). Upon injection of buffered solutions of nicotine into the bladder of cats, the absorption and toxic effects progressively increased from pH 4.5-6.0 to pH 9 (Travell, 1940). Travell, Bodansky & Gold (1940) suggested that, when the urine was alkalized, the cat might be poisoned by the nicotine which had collected in its own bladder, and which in consequence of the alkalinization was now reabsorbed, and that a similar poisoning might occur in tobacco-smokers from reabsorption of nicotine from the human bladder when the urine was alkaline. This latter suggestion has been rebutted by Haag & Larson (1942).

EFFECTS OF SMOKING AND NICOTINE ON RENAL FUNCTION IN MAN

It may be recalled that tobacco (taken internally) was once regarded as a very serviceable diuretic (Fowler, 1785; Sigmond, 1838), although long since fallen into disuse. Two early investigators subjected themselves to experiments in which they compared their urine output during control and smoking periods. Hammond (1856) reported that, compared to control non-smoking periods, the quantity of urine and its urea and chloride content were decreased during five-day periods in which six cigars were smoked per day, while the amount of free acid, uric acid, phosphoric acid, and sulphuric acid eliminated through the kidneys increased. Hare (1885) concluded from rather similar experiments that cigarette-smoking increased the quantity of urine. Many years later, Wenusch & Scholler (1935) tested the effect of smoking three or four cigarettes on the urine output of three subjects (two female occasional smokers and one male heavy smoker) under controlled conditions, and from their observations concluded that tobacco-smoke possessed a diuretic effect proportional to the degree of blood-pressure rise resulting from smoking. The diuretic effect was said to be stronger, the less the smoker was accustomed to smoking, although, if acute mild nicotine poisoning occurred, as in one of their cases, the diuresis temporarily ceased.

When subjects are rendered diuretic following the ingestion of water, alcohol, or water combined with an intravenous injection of glucose, however, smoking or nicotine injection is followed by antidiuresis rather than diuresis. This effect—one of the most interesting and sensitive of the pharmacological responses to smoking—was first demonstrated by J. H. Burn, Truelove & I. Burn (1945), and has been confirmed by a number of other investigators; and the conclusion is fully warranted that nicotine inhibits water diuresis through the release of antidiuretic hormone from the posterior lobe of the pituitary gland (review, J. H. Burn, 1951). It should be emphasized that this nicotine antidiuresis occurs only in the hydrated subject or animal, i. e. in the presence of a renal output of diuretic proportions. This is not surprising, since vasopressin [Pitressin] itself is effective only in the presence of an adequate urine flow. This explains the well-known fact that ordinary smoking by subjects in a state of normal water balance (i. e. non-hydrated) has no effect on renal secretion, or, at any rate, no antidiuretic effect. That smoking may on occasion cause an initial and temporary diuresis is indicated by the experiments of Wenusch & Scholler, cited above.

J. H. Burn and his associates (1945) at first considered it surprising that smoking should cause an antidiuretic action in man, if this were due to nicotine, since the amount of nicotine in the smoke was relatively much smaller than the doses producing this effect in animals. Later work, however, enables one to state that the antidiuresis resulting from cigarette-smoking or from injection of similar amounts of nicotine is comparable in degree; for example, G. P. Burn & Grewal (1951) found that urine flow was inhibited for 60-180 minutes following intravenous injection of 0.8-2.7 mg. nicotine, and for 105-195 minutes following the smoking of 1-2 cigarettes.

Considerable individual variation in sensitivity to the antidiuretic effect of cigarette-smoking exists (J. H. Burn, Truelove & I. Burn, 1945; Bisset & Lee, 1958), and the amount of antidiuretic hormone (ADH) liberated by one to two cigarettes also varies according to the sensitiveness of the subject (G. P. Burn & Grewal, 1951). When cigarette smoking was done so intensely that side-effects (pallor, sweating, nausea, giddiness) were experienced by the subjects, the amount of ADH liberated was very greatly increased (G. P. Burn & Grewal, 1951); and the

antidiuretic effect of intravenously-injected nicotine also seemed to be increased in those subjects who had severe and protracted reactions (Hanenson *et al.*, 1956). The antidiuretic effect of smoking appears to be less when tolerance to smoking has developed (J. H. Burn, Truelove & I. Burn, 1945; J. H. Burn, 1957); and, on the whole, smokers have been found to be less sensitive than non-smokers to the antidiuretic effect of cigarette-smoking (J. M. Walker, 1949; Chalmers & Lewis, 1951). Bisset & Lee (1958) have suggested that, in those individuals who do not respond to the antidiuretic effect of cigarette-smoke, release of ADH from the neurohypophysis is inhibited by a high level of epinephrine in the circulation. It is possible to carry this speculation somewhat further to explain the differences in response between smokers and non-smokers. In the doses obtained from ordinary cigarette-smoking, nicotine (1) stimulates the supraopticohypophyseal mechanism to release ADH, and (2) stimulates the adrenal medulla to release epinephrine. The latter hormone, under certain conditions, inhibits the release of ADH; and whether smoking will or will not result in antidiuresis thus depends upon the quantitative relationship between (1) and (2). If smoking has indeed a lesser antidiuretic effect in (hydrated) smokers than in (hydrated) non-smokers, the explanation may lie in one of two alternate possibilities: (1) The adrenal medulla of smokers is more sensitive (less tolerant) to nicotine than that of non-smokers. Or (2) the supraopticohypophyseal mechanism of smokers is more tolerant (less sensitive) to nicotine than that of non-smokers. Since more or less limited tolerance to the general effects of nicotine does develop in normal (i. e. non-hypersensitive) smokers, it is likely that the supraopticohypophyseal mechanism shares this tolerance. In individuals hypersensitive to nicotine, however, it is not impossible that the adrenal medulla shares in the hypersensitivity to the drug, as Bisset & Lee imply. We may perhaps instance the tolerance to the diuretic effect of caffeine which develops in habitual tea-drinkers as an analogous phenomenon.

In one of Burn's studies, he reported failure to produce antidiuresis in a subject from smoking a pipe; instead, there was an increased rate of excretion. Leishman (1951) repeated this experiment on three young healthy non-smokers who, after drinking a liter of warm water, each smoked a new briar pipe as continuously as possible for 15 minutes and swallowed all saliva produced. As compared to control runs without smoking, diuresis was not inhibited.

Lang & Mokry (1954) studied the effect of inhaling the smoke from one cigarette on 25 clinically healthy males aged 20-65 years; of these, 72% showed suppression of diuresis and 64% showed electrocardiographic changes, and, with but two exceptions, the suppression of diuresis correlated with the development of EKG changes indicative of coronary insufficiency or of a local endocardiac anemia. In patients with congestive heart-failure as well as in normal subjects, antidiuresis was produced by cigarette-smoking (Sinclair-Smith *et al.*, 1950) as well as by intravenous injection of nicotine (Hanenson *et al.*, 1956). An antidiuretic response to nicotine injection was also produced in patients with cirrhosis of the liver and in one patient with Addison's disease (Bernstein *et al.*, 1953).

In agreement with the results described in the preceding section on hypophysectomized rats, Cates & Garrod (1951) reported that in eight patients with diabetes insipidus, there was little or no fall in urinary flow when given amounts of nicotine which caused marked antidiuresis in normal subjects. In some of the patients, however, large (4.5 or 6 mg.) amounts of nicotine did induce antidiuresis, considered to be due to liberation of ADH, suggesting that in clinical diabetes insipidus, lesions of the supraopticohypophyseal system are often incomplete. Also, two patients with functional polydipsia (non-smokers) showed a good antidiuresis after 1 mg. of nicotine. Lewis & Chalmers (1951) tested on 11 subjects with clinical diabetes insipidus the antidiuretic effect of smoking one, two, or three cigarettes, and in seven cases found only a slight change in urine flow, compared to normal subjects. In this connection, a singular case reported by Saxe (1870-71) is not without interest. The patient, a 59-year-old man, developed a saccharine diabetes about a year after stopping the use of tobacco, voiding in 24 hours about 10 quarts of urine. Saxe prescribed a diabetic regimen, and the patient remained in quite good health, but complained of dryness of the mouth and throat. Recalling then that the man had stopped the use of tobacco, Saxe urged that he resume its use to see whether his symptoms were related to abstinence from tobacco; the effect was immediate; that night the patient voided only a normal amount of urine, and the diabetic characteristics of the urine completely disappeared.

According to Carter & Simpkiss (1956), mothers of boys with sex-linked nephrogenic (vasopressin-resistant) diabetes insipidus show defective urinary concentration in response to dehydration, and a di-

minished antidiuresis after vasopressin. Garrod (1956) tested one such mother with intravenous vasopressin and nicotine, and found a failure to respond normally to very large doses of vasopressin (i. e. a quantitatively subnormal response), while intravenous injection of 2 mg. nicotine base produced a qualitatively abnormal response: instead of an abrupt antidiuresis, during two hours there was a gradual fall in urine flow from 7.4 to 0.68 ml./minute. Endogenous creatinine outputs indicated a transient reduction in the glomerular filtration rate. Garrod was unable to explain the odd pattern of the nicotine response.

Burn, Truelove & Burn (1945) considered it probable that nicotine, or the nicotine absorbed from tobacco-smoke, stimulated the supra-optic nucleus and adjacent nuclei which also send nerve fibers to the neurohypophysis; and when impulses arrive in the posterior lobe, the antidiuretic hormone is released. This view has been concurred in or accepted by most of the workers mentioned above. The inhibition of diuresis is thus a tubular effect, and this has been demonstrated by measurements of insulin clearances and urinary chlorides (Chalmers & Lewis, 1951); changes in glomerular filtration rates are apparently not involved (Eggleton, 1949; Sinclair-Smith *et al.*, 1950; Cates & Garrod, 1951; Hanenson *et al.*, 1956). Circulatory factors, such as a fall in blood pressure, have been minimized (Cates & Garrod, 1951), and may in fact be ruled out by the observation that such circulatory changes as follow administration of nicotine in the doses used are transient in nature, whereas the inhibition of diuresis persists for 1-2 hours. According to Burn, Truelove & Burn (1945), an intravenous dose of 1 mg. nicotine did not exert a single momentary stimulus to the posterior lobe, but rather one which persisted for 3-45 minutes, and one which was found to be approximated by two intravenous doses of 50 milliunits of posteriorlobe extract given 45 minutes apart. A comparable antidiuresis to that following ordinary smoking of one or two cigarettes occurs following injection of 50-100 milliunits of vasopressin (Walker, 1949; Chalmers & Lewis, 1951).

EFFECT OF SMOKING AND NICOTINE ON THE COMPOSITION OF HUMAN URINE

Sinclair-Smith and co-workers (1950), testing normal subjects and patients with congestive heart-failure, found that the antidiuresis resulting from smoking two cigarettes in 5-7 minutes was not associated with any change in the rate of sodium or chloride excretion; these results were confirmed by Hanenson and associates (1956) in subjects given intravenous injections of nicotine. Contrary findings were reported by Walker (1949) in subjects smoking cigarettes or receiving nicotine intravenously, in whom inhibition of diuresis was accompanied by a rise in total excretion of chlorides; similar results were obtained by Cates & Garrod (1951) in patients with diabetes insipidus receiving large amounts of nicotine, and by Chalmers & Lewis (1951) in subjects deeply inhaling the smoke of one to three cigarettes. It may be noted that the antidiuretic hormone causes a decrease in sodium and chloride reabsorption by the renal tubules, and that the chloride-concentrating ability of the tubules, which is enhanced by ADH, is considerably more sensitive to this hormone than is the parallel water-resorbing power (Silvette, 1940). Therefore, it might be expected, under the proper experimental conditions, that nicotine administration or smoking would lead to an increase in urinary sodium and chloride concentrations.

According to Pouchkine (1890, 1891), smoking 25 cigarettes per day for three days had no effect on the acidity of the urine of seven non-smokers. As a result of personal observation, Kohos (1894) stated that tobacco had no influence on urinary acidity.

Küchle and co-workers (1952b) studied the urine of eight male and one female subjects during a one-week control non-smoking period, a two-week smoking period, and finally an eight-day subsequent observation period; no effects due to smoking were found on albumin, urobilin, urobilinogen, acetone, or acetoacetic acid, and no effect was noted on microscopic examination of the centrifuged solids. Urinary excretion of uropepsin varied so widely during periods of abstinence from smoking and during smoking periods that no conclusions could be drawn relative to the effect or lack of effect of smoking (Cooper *et al.*, 1957).

A few observations have been recorded concerning the urine in nicotine poisoning. Töppner (1931) cited Bucelli (1896) and Stern (1901) as having first observed sugar in the urine as a result of nicotine poisoning. In reported cases of acute nicotine poisoning, concentrations of glucose of about 2% were found (Faulkner, 1933; Joos & Wolf, 1933); but in another case, glucose was absent (Mattei, 1939). More or less albuminuria has been noted in cases of acute nicotine poisoning (Knack, 1932; Willis, 1937; Mattei, 1939), although in another case, no albumin was found (Mattei, 1939).

NICOTINE TESTS FOR NEURO-HYPERPHYSEAL FUNCTION

Dingman, Benirschke & Thorn (1957) suggested that the antidiuretic response to nicotine appears to be a useful means of assessing hypothalamic function in man. These workers administered nicotine to nine patients with polyuria to test the integrity of the hypothalamic nuclei, hypertonic saline to assess the function of the osmoreceptors, and pitressin to evaluate the response of the renal tubules to the antidiuretic hormone; the dosage of nicotine employed was 1 mg. in the case of non-smokers and 3 mg. in the case of smokers, given intravenously over a 3-5-minute period. Three patients showed no or little antidiuresis with nicotine or saline solution, indicating a complete loss of or insufficiency in neurohypophyseal function in these diabetes-insipidus cases. In the next three patients, there was a significant antidiuresis following nicotine, but no response to the hypertonic saline; these had posterior-pituitary damage or vascular disease; and the selective failure of osmoreceptor function was postulated to account for the polyuria, since hypothalamic neurosecretory tissue producing ADH was still preserved. The remaining three patients with psychogenic polydipsia demonstrated abnormal responses to nicotine and normal responses to hypertonic saline. Pommatau & Bail (1958) also described studies on the nicotine tests in polyuric and polydipsic syndromes, and they found two limitations which lessen the diagnostic value of the procedure. In principle, a negative test indicates the existence of a true diabetes insipidus; in rare cases, however, the negative results of the test can depend upon a temporary inhibition of ADH secretion. A negative test with a suspected psychic context must always be repeated, if necessary after re-conditioning. In principle, a definitely positive test proves that the supraoptico-hypophyseal system is intact; however, large doses of nicotine, or normal doses which in some cases produce a secretion of epinephrine, can give a false positive test. Concerning the prognostic value of the test, Pommatau & Bail stated that the importance of an unequivocally positive response in the course of a potomania and, particularly, of a post-traumatic or post-operative polyuria is clearly recognizable, in that it enables one to predict the transitory character of the syndrome. It should be added that the existence of individual variation is sensitivity to the antidiuretic effect of cigarette-smoking illustrated to Bisset & Lee (1958) the unreliability of nicotine or smoking as a test for neurohypophyseal function.

SMOKING AND DISEASES OF THE URINARY TRACT

J. H. Burn, Truelove & I. Burn (1945), noting the antidiuretic action of nicotine and of smoking, raised the question whether those with impaired kidney function should be allowed to smoke. However, Hammond & Horn (1958), analyzing the mortality rates of 187,783 men, concluded that little or no association was evident between cigarette-smoking and nephritis or nephrosis. The case reported by Trillot & Valatx (1947) falls into a separate category; these writers reported a case of subacute glomerular nephritis attributed to tobacco in a man committed to an asylum following alcoholic excess; the patient had been chewing untreated tobacco leaves for several weeks. On the whole, urinary signs and symptoms have been lacking in reported cases of acute nicotine or tobacco poisoning; a frequent necessity to urinate was noted in his patient by Blanchard (1869), and involuntary urination in a fatal case was reported by McNally (1920). McKim, Smith & Rush (1943) reported eight cases of frequency of urination in excessive cigarette-smokers whose urinary symptoms disappeared within 2-3 days after changing brands. The authors considered the cause to be a specific irritating effect of certain chemicals (volatile oils) on the vesical neck, the port of entry being either the lungs or the gastrointestinal tract. In this connection, it may be observed that Jankau (1893) stated that smoking should be denied persons who have undergone bladder operations for the first week after surgery.

An experimental study in mice by Holsti & Ermala (1955) on the subject of oral exposure to tobacco tar and papilloma of the urinary bladder suggested to these workers a relation between smoking and cancer of the bladder. Subsequently, this association has been studied in clinical material, and has occasioned considerable interest and comment (Bonser, 1957; Kennaway, 1957; Brit. M. J. *1:* 218-219, 1957; Study Group on Smoking and Health, 1957; Lancet, Lond. *1:* 1320, 1958).

Lilienfeld, Levin & Moore (1956) demonstrated a statistical association between smoking and cancer of the urinary bladder in men, but not in women. This association was limited to those who gave a history of having smoked for 30 years or more, and was of a lower degree than that found in the case of lung cancer. Denoix & Schwartz (1956) compared 60 men with cancer of the bladder to equal numbers of paired controls (healthy individuals; non-cancer patients; lung-cancer patients), and they concluded

that their data indicated a significant association between cancer of the bladder and cigarette-use, although the association was less pronounced than that which corresponds to lung cancer. This conclusion was somewhat qualified in a later publication in which it was said that an association was observed between tobacco and cancer of the lung, and, probably, the bladder (Schwartz, Denoix & Anguera, 1957). Clemmesen, Lockwood & Nielsen (1958) found a larger proportion of smokers, and of heavy pure smokers of cigarettes, cigars, and cigarillos in 282 men and 87 women with papilloma of the urinary bladder than in the normal population. The increase in frequency of such papillomas among men in Copenhagen was parallel to the increase in frequency of, and mortality from, bronchogenic carcinoma, although occurring at a lower level. These latter authors suggested that it might reduce the risk of recurrences and of malignancy if patients with bladder papillomata abstained from smoking.

In the prospective study by Hammond & Horn (1958) alluded to above, a very high association was evident between cigarette-smoking and cancer of the bladder.

Referring to the studies of Holsti & Ermala and Lilienfeld, Levin & Moore, Bonser (1957) stated that he knew of only one chemical—2-acetylaminofluorine—which, after oral administration, has induced true papillomas and carcinomas of the bladder in mice; he therefore advised caution in accepting experimental data as supporting evidence for the carcinogenic activity of tobacco tar until convincing experiments have been performed. After a review of the paper by Clemmesen and his associates, in addition to the two just mentioned, *The Lancet* (*1:* 1320, 1958) concluded: "An association between papilloma and cancer of the bladder on the one hand and the manufacture, purification, and usage of certain aromatic amines on the other is well established in every country where such an industry exists . . . in this chemical age it is to be expected that the incidence will rise for reasons unconnected with tobacco smoking." *The British Medical Journal* (*1:* 218-219, 1957) concluded that the published data were suggestive of a cause-and-effect relationship between smoking and cancer of the bladder, but that it would be premature to conclude that a relationship had been established; furthermore, it is necessary to explain why no relationship is observed in women, and why cigarettes should be more harmful than other forms of smoking.

We may remark that, contrary to the situation which exists in the alleged smoking—lung-cancer relationship (in which a purportedly demonstrable carcinogen—tobacco "tar"—is known to reach the site of the lesion), no known carcinogen has yet been found in or isolated from the urine of smokers. Since nicotine (and, in all likelihood, its detoxication products) is non-carcinogenic, the presence of nicotine and/or its metabolites in the urine of smokers cannot well be related to carcinoma of the bladder. Benzpyrene, which is on the other hand carcinogenic in animals, is said to be present in cigarette-smoke in concentrations too small to account for pulmonary carcinogenesis (see Wynder & Wright, 1956; Wynder, Fritz & Furth, 1957); and if this is true where the benzpyrene appear to be maximally concentrated, as on the bronchial epithelium, one cannot help but conclude that its concentration in the urine following its absorption and partial or total detoxication and excretion also should be below any "threshold" for bladder carcinogenesis. It would seem, then, that demonstration of the presence of adequate amounts of a known carcinogen in the urine of smokers is a prerequisite to any allegation that there is a "cause-and-effect" relationship between cigarette-smoking and cancer of the bladder. The experiments of Roffo (1931), who placed in the bladder of rats globules of resin in which tobacco extract had been incorporated, and who claimed to have found at the end of 8 months papillary formations in the bladder of a distinctly neoplastic type, are surely irrelevant; moreover, similar lesions were found using distillation products of tar, tricresol, and aniline oil.

THERAPEUTIC USES OF TOBACCO AS A DIURETIC AND IN DISEASES OF THE URINARY TRACT

Fowler (1785) employed tobacco in 31 dropsical cases, 18 of which were cured and 10 relieved. Towards the middle of the following century, a physician signing himself W. A. G. (1840) reported that application of a moistened tobacco-leaf over the epigastrium in two dropsical patients was immediately followed by a profuse discharge of urine and the disappearance of dropsical symptoms.

Pavessi (1853, 1854) reported a case of paralysis of the bladder in an elderly man, which he treated by twice-daily instillations of solutions of nicotine; the bladder acquired a daily increased power of contraction, so that at the end of 15 days, the catheter was laid aside.

EFFECT OF SMOKING ON WATER EXCHANGE IN MAN

In experiments performed on himself, Hammond (1856) reported that, during five-day periods in which six cigars were smoked per day, the amount of aqueous vapor given off in respiration was decreased in comparison with control non-smoking five-day periods.

Sivadjian (1956), using a hygrophotographic method, found that the smoking of two cigarettes by two non-smokers led to an increase in insensible perspiration in the palm of the hand; the number of active sweat glands and extent of glandular activity increased.

This survey of the experimental and clinical literature on the effects of tobacco on renal function and the urinary tract has revealed a curious and even a unique phenomenon. On the one hand, quite massive doses of tobacco or nicotine, acutely or chronically administered, have surprisingly little direct effect on kidney function or structure in animals; and the extensive literature on acute tobacco or nicotine poisoning in man confirms the absence of "acute" effects of tobacco-use on this system, while the exceedingly small number of case-reports of urinary-tract dysfunction or damage in smokers makes it apparent that "chronic" effects of tobacco-use are equally conspicious by their absence. The recent claims of a statistical association between cigarette-smoking and cancer of the bladder would appear to represent a purely artificial correlation; at least, one must consider this to be a strong probability in view of the complete lack, to date, of any biological basis for such a correlation, as well as of any immediately apparent theoretical basis for any such pharmacological-pathological association.

But on the other hand, the effect of tobacco-smoking in releasing antidiuretic hormone from the posterior lobe of the pituitary gland represents one of the relatively few predictable and reproducible pharmacological actions of *ordinary* smoking on the human organism. Although the effects of such ADH release are apparent only in "hydrated", and not in normal individuals, and even so represent indirect rather than direct effects on renal function; yet the susceptibility of the human supraopticohypophyseal system to such small doses of nicotine as obtained in ordinary smoking is a fact of great and interesting importance. Fulton (1955) has stated that the importance of the hypothalamus as a center for integration of visceral function has come to be appreciated only in recent years; and it is to be hoped that future research in the field of nicotine pharmacology (and smoking) will be directed towards the elucidation of the central rather than the peripheral autonomic effects of this drug. Since the hypothalamic mechanisms are particularly sensitive to nicotine, as shown by the antidiuretic effect (potential or actual) of ordinary smoking, it is possible to speculate that the well-known alterations in appetite and body weight, which follow smoking and stopping smoking, are similarly mediated through the hunger and satiety centers which have been shown to exist in the hypothalamus. Thus, a field of research opens up through the observation that the supraopticohypophyseal mechanism seems peculiarly sensitive to nicotine.

Editor's Note: A full bibliography of this report will be used in the reprints which may be obtained from the authors.

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Richmond, Virginia

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

The Past Five Years

What has happened to Blue Cross and Blue Shield during the past five years is of interest not only as history, but as a portent concerning the future. Perhaps the future of voluntary prepayment as a whole, as well as that of the service Plans—and thus the continued success or defeat of our voluntary, free enterprise system of providing health services—is presaged by the trends which apparently have developed 1955 through 1959.

During the five year period, the Blue Shield Plan which has its headquarters in Richmond, through changes in rates charged, arranged that each subscriber increase by 76% his payments into the pool of public funds which the Plan administers. Throughout the period the Plan's payments to physicians remained quite consistently at 90% of subscriber income; thus, the 76% greater payment made by the subscriber all went to physicians.

The additional payments to physicians, in behalf of each subscriber, covered certain new services which were added to the Blue Shield program and covered an increase in the subscriber's rate of usage of doctors' services, as well as the expense of an upward revision of the Plan's fee schedules. However, the latter change produced a 33-1/3% increase in the amount of payment to a doctor—per service.

Nonetheless, despite the larger payment per service received by doctors, the ratio of adequacy of Blue Shield payments to doctors' charges showed no change during the five year period. In 1959 the Plan's payments related to doctors' charges as follows:

70.3% of surgeon's charges covered
80.4% of medical charges covered
61.5% of consultation charges covered
73.4% of anesthesiology charges covered

These percentages vary from those pertinent to each of the five years by no more than a few tenths of one percent—despite the 33-1/3% increase in Blue Shield fees paid.

In 1955, the Richmond Blue Cross Plan was charging Group-enrolled families $4.90 per month. During 1959 the family rate was established at $9.40, a 92% higher rate. About 28% of the 92% can be accounted for by increases in hospital operating costs, which went up approximately 5% per year throughout the five year period. Thirty-three cents of the 1959 rate, or 3.5%, was needed to cover additional Blue Cross benefits, primarily extending coverage of nervous and mental care from ten days to sixty days. The balance of the 92% rate-hike was necessitated by the progressive increase in utilization experienced during the period.

How local usage of hospital beds has increased is all too glaringly apparent from the following table in which admissions and total days are presented in terms of "per thousand persons covered":

Local Experience

	1955	*1959*
Admissions:	149	165
Average stay:	7.61 days	8.32 days
Total Days:	1090	1370

Thus, the total days of hospital care paid for by the Plan for each 1,000 of its members increased 25.7% during the five year period. At about $22.00 per day, and with 400,000 members, this increase in utilization rate amounted to an increase in Blue Cross expenditures of two and a half million dollars.

Though some increased utilization was to be expected because of medical advances and certain demographic trends, the 25.7% increase of bed-utilization rate in Virginia seems entirely out of keeping with the comparable 7.2% increase experienced by Blue Cross Plans nationally. The discrepancy between local and national experience seems all the more inexplicable when it is considered that the levels of utilization in Virginia in 1955 were higher than those of the nation in 1959.

National Experience

	1955	*1959*
*Admissions:	131	139
Average stay:	7.45 days	7.60 days
*Total Days:	973	1043

* Per 1,000 members

Although the increase in local utilization rate does

not seem based on medical necessity, or even propriety, it is nonetheless explained in large part on the basis of availability of hospital beds.

During the five year period under consideration, the number of hospital beds available for use by local Blue Cross members and their doctors increased 13.2%. If, in fact, the availability of beds increases injudicious utilization, Blue Cross is in for more trouble because as of today, either under construction or on drawing-boards, there are enough additional beds to bring about a further increase of 16.5% by the end of 1962.

Obviously the trends that are adversely affecting the efficacy of Blue Cross-Blue Shield are equally affecting health insurance and other forms of prepayment. The deductible and co-insurance features of prepayment coverage must, of course, be increased —to the detriment of prepayment's ability to do the job the public demands of it. The public's demands will be served, either through its voluntary institutions or through its government. But perhaps it is not too late for the medical profession to take truly aggressive action to preserve the voluntary, free-enterprise way of meeting the public's demands. However, continuance of the laissez-faire policy which the profession seemingly adheres to with a Pollyanna-optimism is tantamount to an invitation for ambitious social-planners to assume the leadership the profession now is failing to exercise.

What to Do in Case of Poisoning

Handy reference cards telling what to do in case of accidental poisoning and how to prevent such emergencies have been made available by the American Medical Association.

The cards reflect a growing awareness of the magnitude of the problem, according to Bernard E. Conley, Ph.D., secretary of the A.M.A. Committee on Toxicology.

Statistics show that 1,422 persons, 355 of them pre-school children, were killed in one year by packaged chemicals, such as detergents, cleansers, and other household cleaning agents, while thousands were injured.

"The first aid for poisoning chart serves as both a reminder of the dangers of accessible poisons to small children and as a help in meeting poisoning emergencies," Dr. Conley said. "Its life-saving potential may be equated with its value in educating the public on what to do when poisoning occurs."

As another means of preventing poisonings, the A.M.A. is supporting a bill, now before Congress, that would require household, commercial, and industrial products to carry labels listing their contents.

The cards suitable for attaching to medicine cabinets, may be obtained free of charge from the Committee on Toxicology, American Medical Association, 535 N. Dearborn St., Chicago 10, Ill.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

"Control of Communicable Diseases in Man"

The rules and regulations contained in "Control of Communicable Diseases in Man", a publication of the American Public Health Association, were adopted many years ago by the Virginia State Board of Health and were declared by this Board to have the force and effect of law within this Commonwealth, except where any town or city, in accordance with authority granted in its charter, has adopted other rules and regulations not contrary to law. This authority has been vested in the State Board of Health of the Commonwealth of Virginia by Section 1487 of the Code of Virginia and by the provisions of other acts.

A new edition, the ninth, of this manual, Control of Communicable Diseases in Man, published early this year, has been received in the central office of the State Department of Health, and is being distributed to the local health departments and to the reporting physicians of the State. Each local health department office will be sent three copies, one for the director, one for the nurses, and one for the sanitarians, and a copy will be sent to each physician who is listed as sending weekly report cards of communicable diseases to local health departments.

A revision of the manual is made each five years by the Subcommittee on Communicable Disease Control, which is currently a subcommittee of the Committee on Evaluation and Standards of the American Public Health Association. This subcommittee requested and received collaboration from the following national and international organizations:

U. S. Department of Defense
U. S. Office of Civil & Defense Mobilization
American Academy of Pediatrics
Conference of Public Health Veterinarians
Ministry of Health for England and Wales
Department of Health for Scotland
Pan American Sanitary Bureau
World Health Organization

This is the fourth edition in which the Ministry of Health for England and Wales and the Department of Health for Scotland have collaborated, and the third in which the World Health Organization has participated.

The aim of the manual is to provide an informative text for ready reference by public health workers of official and voluntary health agencies, to include physicians, dentists, veterinarians, sanitary engineers, public health nurses, social workers, health educators, and sanitarians; and for physicians, dentists, and veterinarians in private practice having a concern with the control of communicable diseases. The booklet does not substitute for standard text books. While primarily intended for workers in the Americas, and therefore largely expressive of American practices and ideas, the content is broadly representative of global infectious diseases.

The report of the committees was originally designed as an aid in formulating standard regulations for administrative control of communicable diseases for which notification was required by State and municipal health authorities of the United States; succeeding editions have given a more comprehensive coverage of world infections. The present list includes most conditions of public health importance, with a goodly representation of the less common and less significant diseases which so often present puzzling problems in administrative action.

Notification to the local health authority that a case of communicable disease exists within the particular jurisdiction is the first step toward control. A system of reporting functions at four levels. The first is collection of the basic data in the local community where disease occurs. The data are next assembled at district, state, or provincial level. The third level is collection of total information for the nation. Finally, for certain prescribed diseases, report is made by the national health authority to the World Health Organization.

The local health department uses the information immediately to tabulate what diseases are within its bounds and for investigation and control. It forwards these reports to the State Department of Health. This office compiles a report of diseases in the State and returns a weekly morbidity report to the local health departments and to the reporting

physicians. It makes a weekly report to the National Office of Vital Statistics and, in turn, receives from that office a weekly report of communicable diseases in the States and Territories of the nation with comments on certain reports of unusual or special interest. Our national health authority reports certain diseases to the World Health Organization, which returns a report of these diseases as they exist throughout the world.

Diseases to be reported to local health departments are:

- Amebiasis
- Anthrax
- Aseptic Meningitis
- Botulism
- Brucellosis (undulant fever)
- Cholera
- Diphtheria
- Encephalitis
  - infectious
  - arthropod-borne
  - other
- Hepatitis
  - infectious
  - serum
- Leprosy
- Leptospirosis
- Malaria
- Measles
- Meningococcal Infections
- Plague
- Poliomyelitis
  - nonparalytic
  - paralytic
  - unspecified
- Psittacosis
- Rabies in Animals
- Rabies in Man
- Relapsing Fever
  - louse-borne
- Rheumatic Fever
- Rocky Mountain Spotted Fever
- Salmonellosis
  - all types including typhoid and paratyphoid
- Shigellosis
- Smallpox
- Streptococcal Infections including scarlet fever
- Tetanus
- Trichinosis
- Tuberculosis
  - all forms
- Tularemia
- Typhoid Fever
- Typhus Fever
  - endemic
  - epidemic
- Venereal Diseases
  - Gonorrhea
  - Syphilis
    - primary
    - secondary
    - early latent
    - other forms
- Whooping Cough
- Yellow Fever

Case report of a communicable disease provides minimal identifying data of name, address, diagnosis, age, sex, and date of report for each patient and in some instances for suspects. The date of onset and the date of diagnosis are useful.

Reports of Epidemics. In addition to requirement of individual case report any unusual or group expression of illness which may be of public concern is desirably reported to the local health authority by the most expeditious means. This procedure is to be followed whether the disease is well known and subject to routine report, indefinite or unknown, or absent from the list of diseases officially reportable. Pertinent data of the epidemic report include number of cases, within what time, approximate population involved, and apparent mode of spread. The report is forwarded to the next higher jurisdiction by telephone or telegraph. Examples of epidemics involving diseases not usually reportable are food outbreaks and influenza.

Diseases should be reported by the physician in attendance on the case. In the event that no physician is called to see the patient, the lay attendant (father, mother, guardian, husband, wife) is responsible for reporting the case.

In addition to his responsibility for the clinical diagnosis and treatment of cases of communicable diseases, the practicing physician has other responsibilities related to the public health of the population or area he serves:

(1) He should report promptly all cases of diseases which are herein declared reportable

(2) He should cooperate with the local and State health departments in carrying out health regulations, especially in instituting isolation and, rare instances, quarantine, and in obtaining release cultures when applicable

(3) He has an additional obligation to cooperate with the local health authorities in developing and executing a good program for the control of communicable diseases

(4) He should acquaint himself with and make appropriate use of the services of the Laboratory of the State Department of Health to assist him in arriving at an accurate diagnosis of illnesses among his patients

(5) He should be familiar with the drugs and biologic products which are provided by the Department of Health free of charge and those for which a charge is necessarily made.

Diseases in the manual "Control of Communicable Diseases in Man", are listed in alphabetical order and under each disease are numerous headings, such as—

- Identification
- Occurrence
- Infectious agents
- Reservoir and source of infection
- Mode of transmission
- Incubation period
- Period of communicability
- Susceptibility and resistance
- Methods of Control:
  - A. Preventive measures
  - B. Control of patients, contacts, and immediate environment
    1. Isolation
    2. Concurrent disinfection
    3. Terminal disinfection
    4. Quarantine
    5. Immunization of contacts
    6. Investigation of contacts and source of infection

7. Specific treatment

C. Epidemic measures

D. International measures

This manual is not distributed generally by the State Department of Health. It goes, as stated above, only to health departments and reporting physicians. Others who may want a copy can order the same from the Book Service of the American Public Health Association, 1790 Broadway, New York 19, N.Y., sending payment in advance. The paper edition costs $1.00 per copy and the cloth bound edition sells for $2.50 each.

Monthly Report of Bureau of Communicable Disease Control

	April 1960	April 1959	Jan.-April 1960	Jan.-April 1959
Brucellosis	6	2	11	7
Diphtheria		1	7	3
Hepatitis (Infectious)	70	29	362	164
Measles	1238	3549	3735	8972
Meningococcal Infections	8	9	26	40
Aseptic Meningitis	1	—	10	—
Poliomyelitis	0	0	0	1
Rabies (In Animals)	34	15	104	65
Rocky Mt. Spotted Fever	0	0	0	2
Streptococcal Infections	910	1180	2993	4651
Tularemia	0	0	20	6
Typhoid	0	2	3	6

Leprosy Control

A member of the World Health Organization's Second Expert Committee on Leprosy said that segregation is still needed to control the disease. In a letter printed in the April 30th Journal of the American Medical Association, Dr. H. W. Wade, Culion Sanitarium, Palawan, Philippines, criticized a news release issued by WHO headquarters in Geneva last August.

He said the release to the effect that the committee had recommended abolition of leprosariums is "simply not true".

Furthermore, he said, the statement in the release saying that the age-old custom of keeping lepers apart from the rest of the community is unnecessary from the medical point of view is "hardly less misleading."

"The recommendation of the committee, in keeping with resolutions of several international meetings held in recent years, is that leprosy should be treated more or less as tuberculosis is treated, with hospitals for the care of patients suffering from the acute 'reactional' episodes of leprosy, for the surgical reconstruction of patients with mutilations, and for the training of personnel and other administrative purposes."

Dr. Wade also clarified the committee recommendations in connection with legislation.

"It was recommended that special laws applying solely to leprosy be abolished and that the disease be taken care of by regulations set up under general laws pertaining to the control of communicable diseases as a whole. That would not, by any means, preclude isolation of some patients if it seems necessary under local conditions in the light of present knowledge of the disease."

Current Currents

HEALTH CARE OF AGED: Both political parties seem determined to bring about the enactment of some form of Forand type legislation having to do with health care of the aged. It is important, therefore, that each member know the thinking of AMA on the question and be able to answer the questions which are sure to be asked by many patients.

In commenting on the Administration's recent proposed medical care plan for the aged, Dr. Louis M. Orr, President of AMA, stated that it is based on the false premise that almost all persons over 65 need health care and cannot afford it. This, according to Dr. Orr, is not true. The truth is that a majority of our older people are capable of continuing a happy, healthy, and in many cases productive life. Only 15 per cent of the 15 million persons in the nation over 65 are on old age assistance. An undetermined number, although able to finance other costs, find it difficult to withstand the additional burden of the cost of illness. None of the Forand type bills are tailored to meet these problems.

Here is AMA's positive 8-point program for the health care of the aged.

(1) The needy aged. These aged now receive health care through OAA programs. Here the need is for better organized medical care programs including improved preventive medical care;

(2) The near-needy. This is the group whose size is indeterminate, who can meet ordinary costs of living but cannot pay for health care costs. The AMA supports a state-administered program of federal grants-in-aid to the states for the liberalization of existing OAA program so that the near-needy could be given health care without having to meet the present rigid requirements for indigency. A liberalized definition as determined locally would permit an expanded program and encompass the near-needy group;

(3) Facilities. Better nursing home facilities for the long-term care of the aged person, especially those over the age of 75, is the most urgent health care need before the nation today. The average age of nursing home patients is 80, and their average duration of stay is 2 years. It is here that major improvement can be brought about. AMA supports federal programs for the provision of grants through the Hill-Burton mechanism to provide for new nursing home additions to existing hospitals. For proprietary nursing homes the AMA supported the recently enacted amendment to the Federal Housing Act providing for government guaranteed mortgage loans to proprietary nursing homes. AMA is also cooperating with the American Nursing Home Association

and the American Hospital Association in an effort to bring about a rapid improvement in medical care provided in nursing homes;

(4) Voluntary health insurance. Health insurance and prepayment policies tailored to meet the needs of the aged for long-term nursing home care, must be developed as rapidly as possible. Health insurers and the Blue Cross and Blue Shield Plans across the nation are already experimenting in this new area of coverage;

(5) Home nursing care. Care of the aged patients at home is psychologically, medically and financially desirable. Many programs to promote home nursing care are being developed.

Homemakers services also provide opportunities for children caring for aged mothers or fathers to continue gainful occupation. They need to be expanded;

(6) Attitude toward aged. A basic change in attitude toward the aged person must be brought about. The person who reaches 65 has not suddenly become non-productive, and senescent. On the contrary, most persons over 65 are reasonably well and able to work. Increased productivity by eliminating compulsory retirement and permitting voluntary change of work is an essential part of the answer to the present problem;

(7) Health education. Many older persons are unaware of the need for continuing healthful nutrition and other practices that contribute to good health. Above all the "will to live" is essential to continuing health. Preventive medical measures instituted long before the age of 65 also can contribute materially to the promotion of good health after age 65;

(8) The purchasing power of the dollar. One of the principal economic problems of the aged person in the last twenty years has been the constant and continuing erosion of the purchasing power of his pension benefits. Any government program to help the aged must be anti-inflationary and maintain the purchasing power of fixed pension and annuity benefits.

PILOT EXAMINATIONS: Effective June 15, 1960, student and private pilots must receive their medical examinations from designated medical examiners. Because of the many questions that have been raised concerning this ruling, Dr. James L. Goddard, Civil Air Surgeon, has emphasized that any physician may make application for designation as an examiner. He has requested that your editors publish the following objectives which the ruling hopes to achieve: (1) To maintain a group of medical examiners who are clearly responsive to the needs of public safety in the performance of examinations and the issuance of medical certificates to airmen; (2) To permit the administration of training programs to maintain the quality of performance of medical examiners and to permit the dissemination of special instructions pertaining to the needs of civil aviation; (3) To bring into the program those physicians who have the professional qualifications and a demonstrated interest in the medical certification field.

Mental Health . . . .

DIETRICH W. HEYDER, M.D.

Psychiatric Consultation to Social Agencies

The Mental Health Center of Norfolk has recently extended to the various agencies of the city and county a program of psychiatric consultation. The idea in itself is not new. However, since our experience has been rewarding, we feel that a presentation of our program is warranted.

The task of the Mental Health Center in Norfolk is manifold. While we give diagnosis and treatment to mentally sick individuals, an attempt is also made through general educational efforts to improve the public's opinion of, and emotional reaction to, mental illness and their psychiatric treatment. We also conduct research into the sociological and psychodynamic causes of the diseases with which we work and make some effort at prevention. To these standard services we have added that of consultation to other social agencies and found it to be both idealistic and practical.

The specialized skill and knowledge of our psychiatric team is utilized by the workers of the other agencies in helping the multitude of people with whom they deal. By offering consultation to the various social agencies in the community we can multiply the effects of the Mental Health Center to a considerable degree.

The clinic staff finds the consultation sessions with the persons of different training and experience stimulating. The clinic is now receiving fewer inappropriate referrals for psychiatric workup, and we have understood a great deal more about where to refer problems that we cannot handle. The spirit of cooperation brought about between the Center and the other agencies by this method makes working with them more pleasant, both from a standpoint of personal relations and professional satisfaction.

There are these three facets in our consultation service. First, the professional skills of the psychiatrist, the psychiatric social worker, and the psychologist are made available to the agencies. Second, a program is set up to broaden and deepen the academic knowledge of the personnel of the agencies served. The third is that our own Mental Health Center staff learns from the other agencies what community resources are available in Norfolk.

The decision to provide this broad type of agency consultation was followed by a thorough discussion of how to do it. In the past, certain information had been given to all the agencies at a collective meeting. But there was a feeling that we should provide individually scheduled time for each agency. On the other hand, some agencies were not convinced that consultation would be of benefit to them at all. Others felt that mass meetings offered little in the way of solid achievement because of the extreme differences in the agencies themselves. Agencies differ in size from one worker to over a hundred, services varied from financial assistance to long-term counseling, extensive variations were noted in the amount and type of training the workers had received, while ideological standards (bases on religion or personal opinions) caused differences in recommendations for similar, even identical problems. On the other hand, it was recognized that agencies could gain something from each other. We reached a compromise whereby every agency would be given individual consultation, and a joint meeting of all agencies was planned to follow each period of rotation.

Under the auspices of the Norfolk Council of Social Agencies all agencies of the Community served by the Center were invited to participate. The executive director of one of the agencies was appointed to schedule and coordinate the service.

Consultations for individual agencies were scheduled for each Wednesday from 10 until 12 o'clock, usually in our office. (We have made an effort, however, to visit the office of each agency at least once.) The first consultation with each agency was used to obtain a detailed explanation and interpretation of its functions, goals, and limitations. The second meeting carried the emphasis of what constitutes a psychiatrically valuable history, as well as general referral procedures, plus a restatement of the aims and limitations of a clinic such as ours.

After these preliminaries, the consultation hours were organized and now operate in a rather set man-

Abstract of paper presented to Annual Meeting of Department of Mental Hygiene and Hospitals in Roanoke, November 17, 1959.

DIETRICH W. HEYDER, M.D., *Director, Norfolk Mental Health Center.*

Approved for publication by Commissioner, Department Mental Hygiene & Hospitals.

ner. First, the social history of a selected case is presented by a member of the social agency. This is criticized and discussed thoroughly as to content or lack of content, leading to interpretation of statements made by the client and of his motivation for treatment with stress on the dynamic forces behind the problem at hand. In the interplay between the members of the presenting agency and our staff, we try to arrive at a clear understanding of the case as a whole and in detail.

Of course sessions with an agency fortunate enough to have highly skilled workers, along with a training program for students, differ greatly from sessions with an agency hiring no worker with training in the sociological or psychological field. The level of discussion is adopted to the degree of knowledge.

A discussion of the patient's history and discussion of the handling of the client by the worker frequently leads to criticism of the worker by his co-workers and consultants. Often the very fact that a given case is chosen for presentation indicates adverse feelings between the worker and client. The exploration of these feelings naturally provokes anxiety and hostility on the part of the person who presents the case. If no way is offered to ventilate these feelings, "negative transference" can develop which may even spread to negative feelings and misunderstandings between the agency and the clinic. Therefore, an opportunity on the part of the agency to criticize the consultants is offered freely and often demanded. In this respect the consultative hour can well be compared with the psychotherapeutic hour, where the patient's (agencies) expression of feelings are encouraged and "ventilation" occurs.

The organization asking for consultation is not "advised". Authoritative pronouncements as to the solution of a problem does not usually help. Only what can be worked out by the involved persons is valid and worthwhile. Even so, recommendations can be given and accepted without resistance or resentment if they are based on awareness of the dynamics operating within the client, the recognition of the realistic situation, and the knowledge of the agency's own limitations—limitations that an agency is oftentimes unaware of or does not want to admit possibly because of painful guilt feelings.

The inter-agency meetings, as distinguished from the individual agency consultations, have been of particular interest. They have fostered and improved the inter-action between the consulting members of the Council, where the give-and-take process was particularly invigorating. This might be illustrated by presentation of a case.

One of the family agencies had become involved with a married couple and their three children, one from the father's and two from the mother's first marriage. Behavior difficulties on the part of the parents and the children arose from the immature attitudes of both parents toward their own children. It took a lengthy and complicated discussion including Freudian postulations to clarify part of the history presented and arrive at a workable and dynamic formulation. An unusual amount of criticism was aimed at the psychoanalytic interpretation, a criticism which sharpened the discussion. Eagerness and enthusiasm and emotions ran high. It struck almost like lightning from the blue when a member of the less psychoanalytic minded services arose and asked the very practical question, "Well, what are we going to do about it?" A burst of laughter followed the question together with a sigh of relief, for we all suddenly realized that we were not psychoanalysts but psychiatric consultants and people looking for consultation. We then went ahead with the recommendations.

Generally the discussions are aimed at training personnel, no effort is spared to explain all questions in detail regardless of repetition.

Although the results of the consultation service described above cannot be expressed in statistics, they should be self-evident. Most of the teaching cases presented at the Center can be disposed of without further workup, which saves valuable diagnostic time. The agencies have grown more confident in their own capabilities. The quality of their referrals has consequently improved. They have on the other hand learned to recognize difficulties beyond their scope. They have been able to improve their case work through increased understanding of their clients. The close-knit personal relationships between the Center and the agencies have made all of them feel freer to call on the members of the staff for advice and guidance at any time. This reflects in better service to certain clients who can now receive competent help within a shorter time.

The Center has thus profited in many ways. Cooperation between the Center and the agencies has grown. Through our greater knowledge of the functions and limitations of the agencies themselves the quality and number of referrals to other agencies has improved and the Mental Health Center has become more efficient in the utilization of community resources.

The Medical Society of Virginia . . . .

Council Minutes

A special meeting of the Council of The Medical Society of Virginia was called to order by Dr. Allen Barker, President, at 1:00 P.M., on Sunday, February 28, 1960, at Society Headquarters. Attending were Dr. Guy W. Horsley, Dr. Mallory S. Andrews, Dr. Harry J. Warthen, Dr. Mack I. Shanholtz, Dr. John T. T. Hundley, Dr. Thomas W. Murrell, Jr., Dr. Fletcher J. Wright, Jr., Dr. William N. Thompson, Dr. Byrd S. Leavell, Dr. W. Fredric Delp, and Dr. Richard E. Palmer. Also in attendance were Dr. Vincent W. Archer and Dr. W. Linwood Ball, Delegates to the AMA, Mr. John Duval and Mr. William Miller, Attorneys for the Society, and Dr. Harry C. Bates, Jr., Chairman, Committee on Aging. Also meeting with the Council were Dr. Edward E. Haddock, Dr. Dean B. Cole, and Dr. Benjamin W. Rawles, Jr., all members of the Society's Legislative Committee.

The President informed Council that an unusually large number of bills with medical implications had been introduced in the General Assembly and the meeting had been called for the express purpose of considering them.

First to be considered were House Bills 156 and 503 which had to do with the construction of homes for the aged on a state-local matching appropriation basis. Mr. Thomas Manning, President of the Virginia Nursing Home Association, was introduced and stated that in his opinion the legislation was socialistic and that every effort should be made to keep the State out of the nursing home field.

After further consideration, the following resolution was adopted:

> Be It Resolved, that The Medical Society of Virginia go on record as being opposed to the entrance of the State into the Nursing Home field and that the Governor's Commission on the Aging be urged to continue its studies of existing conditions in this field in order that private enterprise can be properly informed and advised concerning present and future needs.

Council then heard a report by Mr. Duval concerning bills which were of particular interest to the Society and its committees. These had to do with legislative safeguards for committees, amendments to the maternity hospital law, radiation hazards, and medical examination fees and subjects. It was learned that all five bills were progressing satisfactorily.

Next to be considered were those bills pertaining to milk control and supervision. It was moved that Council reaffirm previous actions by the House of Delegates and Council that members of the Legislative Committee in the General Assembly be urged to support House Bills 622 and 623 (would place responsibility for milk control and inspection under Department of Health). The motion further requested that a VALC study be supported if House Bills 622 and 623 were not passed.

Senate Bill 315 was then discussed at great length. This Bill would amend the Virginia Code in such manner as to permit organizations such as the Group Health Association of Washington to operate in Virginia. When Council learned the Legislative Committee had recommended that such legislation be opposed, it adopted a motion to support the recommendation to the fullest extent possible and that the following resolution be used, should the need arise:

> Resolved By the Council of The Medical Society of Virginia:
>
> (a) That a physician owes his allegiance to his patients, and the intervention of a third party between the physician and his patient is inimical to the best interests of the patients, the physicians, and the public.
>
> (b) That the furnishing of medical services by a corporation is contrary to the long established laws and principles governing the practice of medicine in Virginia and should not be permitted.
>
> (c) That the proper function of a medical care program is to assist in the financing of medical costs and not the furnishing of professional services.
>
> (d) That Senate Bill 315 is violative of these established principles and should not be enacted into law.

Next to be considered was Senate Bill 269, which had to do with the labeling of blood for transfusion purposes. Although it was believed the Bill was not popular and quite probably would be killed, it was decided that Council should endorse the following

resolution recently adopted by the Virginia Society of Pathology.

> WHEREAS, there exists no discernable or scientific evidence that blood from an individual of one of the racial groups of human beings differs in any significant quality from individuals of corresponding blood types in other racial groups, and
>
> WHEREAS, there is no evidence that transfused blood persists permanently in any individual, and
>
> WHEREAS, any requirement that blood banks separate and classify blood according to the racial group of the donor would drastically decrease the possibilities of keeping supplied of the types of blood on hand for all therapeutic needs, and tremendously increase the waste of human blood, and would make impossible the use of blood from such important sources as the American Red Cross, and would frequently result in the impossibility of obtaining sufficient supplies of blood of the proper type for the treatment of ill persons:
>
> BE IT RESOLVED, that the Virginia Society for Pathology recommends that the Legislature of Virginia not give favorable consideration to any measure such as Senate Bill 269 which would impose upon the operation of blood banks any unnecessary classification of bloods by scientifically unjustifiable criteria such as the racial groups of the donor.

There followed considerable discussion concerning House Bill 533, which would remove the Virginia Hospital Service Association (Blue Cross) from under the jurisdiction of the State Corporation Commission as far as rate fixing is concerned. The following resolution was adopted:

> RESOLVED, that the Council of The Medical Society of Virginia endorses House Bill No. 533 and favors its passage by the General Assembly of Virginia.

It was then moved and adopted that House Bill 716 be opposed. This was the so-called Christian Science vaccination bill and would have amended the Code in such manner that vaccination would not be required of any child if an affidavit could be furnished stating that such vaccination conflicts with the religious teachings of the individual.

Mr. Miller then explained a proposed amendment to House Bill 328 which would serve to clear up any misunderstanding concerning the methods of treatment (physical therapy) denied to masseurs and others not qualified as physical therapists. Council felt that the amendment was a good one and that no particular action was necessary.

A question was then raised concerning House Bill 198 which would, under certain conditions, make it possible for paying patients to bring suit against charity hospitals. A motion was adopted which would instruct the Legislative Committee to oppose the Bill should such action become necessary.

Dr. Bates asked if a bill establishing 20 General Practice Clinics under the State had been introduced. Dr. Shanholtz indicated, that to his knowledge, no such bill had been introduced.

Dr. Bates then stated the American Medical Association had requested that his Committee on Aging take the initiative in organizing a joint council on aging in Virginia. It was moved and adopted that Council approve efforts on the part of Dr. Bates and his Committee to bring about the formation of such a joint council.

A report by the Executive Committee concerning the physicians award proposed by the A. H. Robins Company was presented by Dr. Wright. He stated that the Committee was of the opinion this would not be a good move at this time, particularly in view of the fact that the Society had just recently abolished the General Practitioner of the Year Award. There was some concern that the award, although proposed with the best of intentions, might very easily do more harm than good. It was Dr. Wright's recommendation that the proposal of the Robins Company be rejected in a most courteous and appreciative manner and the reasons be explained to Mr. Velz. A motion to this effect was adopted.

Mr. Duval then acquainted Council with a bill, supported by the State Hospital Board, which would make it possible to regulate and supervise homes operated by private parties for mentally deficient children. Dr. Shanholtz described some of the conditions he had personally observed at these homes and supported the contention that some authority over them was needed. It was explained that there was known opposition to the bill.

Dr. Archer then reminded members of the Council of the meeting in Washington on March 24 with Virginia's Congressional delegation.

There being no further business, the meeting was adjourned.

ROBERT I. HOWARD, Secretary

APPROVED:

ALLEN BARKER, M.D., President

Miscellaneous . . . .

Mail-Order Rx Schemes

It may well be a long time before the patient who just walked out of your office with an important prescription in his pocket ever gets around to taking the needed medication—the reason—mail-order prescription schemes.

Now being heavily promoted all across the nation, these schemes center their publicity on cut-rate prescription prices.

Here, for example, is what might happen to your patient.

Instead of taking his prescription to his community pharmacist to be filled that day, he drops it into the mail to one of these operations perhaps a thousand miles away. From seven to ten days later, the filled prescription comes back, perhaps too late to do the job for which it was originally intended.

Your patient in the meantime, still experiencing the symptoms which prompted his visit to you in the first place, attempts to tide himself over until the prescription arrives by applying some sort of self-medication which may give him temporary relief and at the same time lessen his understanding of the importance of your diagnosis and the drugs you prescribed.

Not only are dangerous delays characteristic of the mail-order mechanism, but the public is also denied the complete services it has a right to expect from any pharmacist in any pharmacy. As a regular practice mail-order operators refuse prescriptions containing narcotic drugs. Most patients have no knowledge of what is and what is not a narcotic drug; and therefore any warnings by the mail-order house that it will not accept prescriptions for narcotic drugs become meaningless. The patient, after exposure to unnecessary delay, discovers that his prescription is only obtainable from his community pharmacy.

Prescriptions for narcotics are not the only ones which mail-order houses refuse to dispense. There are classes of prescriptions which are being refused by mail-order operators for their own convenience, especially prescriptions which require compounding. Both the ethics and traditions of the pharmaceutical profession demand that a pharmacist make every effort possible to promptly dispense every prescription he receives regardless of the amount of professional attention required.

Because these depots operate on an impersonal assembly-line basis in a jurisdiction where only the supervision—rather than the actual dispensing—by pharmacists is required, the danger of dispensing errors is increased. Moreover, by operating outside the states in which the prescription was originally written, these houses deny the patient the protection he has a right to expect from his own state laws governing the practice of pharmacy.

Another area in which the public is being misled is illustrated by quoting from a full-page advertisement which a District of Columbia mail-order operator inserted in *The Philadelphia Inquirer* of Sunday, April 3, 1960:

> "YOUR PRESCRIPTIONS ARE COMPOUNDED BY REGISTERED PHARMACISTS!
>
> "Our registered pharmacists compound your prescriptions in ultra-modern, regularly inspected pharmacies—using the finest, freshest nationally known ingredients.
>
> "YOUR ORDER IS FILLED IMMEDIATELY TO ASSURE YOU OF FRESHNESS!
>
> "The same day we receive your prescriptions—our pharmacists fill them and mail them out. This assures you of the freshness of every medicine you receive from us. And, of course, with our volume business and volume turnover, our shelves of vitamins and chemical ingredients are constantly replenished with fresh items."

After the publication of this advertisement, it was revealed that the premises described consisted of nothing more than an empty room without any inventory, fixtures, or pharmaceutical equipment.

This advertisement was refused by two other large circulation newspapers, and the matter has been called to the attention of the Federal Trade Commission.

Perhaps as important as anything else to the medical profession is the fact that such schemes make it convenient for certain kinds of practitioners, unauthorized to prescribe in their own states, to write prescriptions that will be filled by these distant operations. The geographical separation between prescriber and dispenser makes it virtually

impossible, and impractical for these operators, to check the source or to offer professional advice to the patient when he receives his medication.

The greatest opportunity for mail-order promotion has been the geriatric market, where public attention has been mostly concentrated in recent months.

A host of other unanswered questions comes to mind when prescriptions are ordered from these assembly-line outfits. For example, how can we safely assume that long-distance dispensing will be as the prescriber intended? Is the way paved for substitution? Has the prescription been compounded under sanitary conditions?

The District of Columbia, where standards for pharmaceutical practice are based on an antiquated 1906 act of Congress, has become the haven for mail-order operators.

One of these Washington-based firms was recently brought before Corporation Counsel of the District of Columbia. The investigating officer described the premises as "without facilities for compounding prescriptions", and noted further that the only "sink was located in the rear of the store by going through a room that had waste paper for wrapping and packaging all over the place and the room where the sink was located proved to be filthy and the sink itself was corroded and stained and in a filthy condition."

That these mail-order prescription schemes are truly a menace to public health was emphasized by a statement made by Dr. George M. Fister, a member of the American Medical Association Board of Trustees, in an address to the recent meeting of the American Pharmaceutical Association House of Delegates. Physicians, he noted, can easily warn their patients of the many flaws in these dangerous mail-order operations. He went on to condemn the mail-order schemes as "one of the gravest problems" facing the health field today.

A physician for more than 30 years, Dr. Fister said that he does his best to discourage any patients from sending prescriptions to a mail-order operation.

"The personal touch is still essential", he said. America's high standard of medical care was "founded on this firm foundation of personal service, and we would be foolish indeed not to preserve it."

The development of highly concentrated synthetic drugs, purified natural products, potent dosage forms and special needs in storage and dispensing all have created new problems of drug supervision, regulation and administration. The pharmacy and drug laws of each state are designed to protect citizens from the effects of ignorance and incompetency in these matters which are beyond individual patient control.

The American Pharmaceutical Association has launched an educational campaign to inform all members of the medical profession about the inherent dangers in mail-order prescription operations. The national professional society is also supporting H.R. 10597 which will bring to the District of Columbia a modern pharmacy act.

At an emergency meeting in Washington, D. C., haven of the prescription-by-mail operators, Dr. William S. Apple, APhA Secretary, declared that, "If this personal pharmacist-patient relationship is not preserved, the next break in the chain will inevitably be the elimination of the physician as the diagnostician and substitution of the mail-order purveyor as the prescriber. The only call on the physician will be to write the death certificate. Individual acceptance of professional responsibility by all members of the medical team can quickly put an end to the development of centralized mail-order prescription depots."

If mail-order prescription hazards are to be fully recognized, the medical profession must join with other members of the health team by reacting quickly and in a positive manner. Otherwise the public will be misled into believing that an impersonal centralized mail-order method is an acceptable substitute for sound community medical-pharmaceutical service.

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Textbook of Otolaryngology. By DAVID D. DeWEESE, M.D,, Clinical Professor of Otolaryngology, University of Oregon Medical School, Portland. And William H. Saunders, M.D., Associate Professor of Otolaryngology, The Ohio State University College of Medicine, Columbus. The C. V. Mosby Company, St. Louis. 1960. 464 pages with 354 illustrations. Price $8.75.

A Traveler's Guide to Good Health. By COLTER RULE, M.D., New York City. Doubleday & Company, Inc., Garden City, New York. 1960. 266 pages. Price $3.95.

Massage Manipulation and Traction. Edited by Sidney Licht, M.D., Honorary Member, British Association of Physical Medicine, Danish Society of Physical Medicine, and the French National Society of Physical Medicine. Elizabeth Licht, Publisher, New Haven, Connecticut. 1960. xiii-275 pages. Illustrated. Price $10.00.

Your Heart. A Handbook for Layman. By H. M. MARVIN, M.D., Associate Clinical Professor of Medicine, Yale University School of Medicine, etc. Doubleday & Company, Inc., Garden City, New York. 1960. 335 pages. Price $4.50.

One Out of Four. A Personal Experience with Cancer by MYRTLE WILLIAMSON. Foreword by Lewis C. Sharman, M.D. John Knox Press, Richmond, Virginia. 1960. 77 pages. Price $1.50.

The Reluctant Surgeon. A Biography of John Hunter. By JOHN KOBLER. Doubleday & Company, Inc., Garden City, New York. 1960. 359 pages. Price $4.95.

Cancer of the Cervix. Diagnosis of Early Forms. In Honour of Prof. C. Kaufmann. Ciba Foundation Study Group No. 3. Editors for the Ciba Foundation G. E. W. Wolstenholme, O.B.E. M.A., M.B., M.R.C.P., and Maeve O'Connor, BA. Little, Brown, and Company, Boston. 1960. viii-114 pages. With 27 Illustrations. Price $2.50.

Drugs of Choice 1960-1961. Walter Modell, M.D., Editor, Director, Clinical Pharmacology and Associate Professor of Pharmacology, Cornell University Medical College; Attending Physician, New York Veterans Administration Hospital; etc. The C. V. Mosby Company, St. Louis. 1960. 958 pages. Price $13.50.

The History of Medicine. By HENRY E. SIGERIST. Edited and with an Introduction by Felix Marti-Ibanez, M.D., Professor and Chairman, Department of the History of Medicine, New York Medical College, Flower and Fifth Avenue Hospitals, New York; Editor-in-Chief, M D Medical Magazine. Foreword by John F. Fulton, M.D. M D Publications, Inc., New York. 1960. xviii-313 pages. Price $6.75.

Neurosurgery. Volume II. Surgery in World War II, Medical Department, United States Army. Prepared and published under the direction of Major General S. B. Hays, The Surgeon General, United States Army. Editor in Chief, Colonel John Boyd Coates, Jr., MC. Editors for Neurosurgery, R. Glen Spurling, M.D., and Barnes Woodhall, M.D. Associate Editor, Elizabeth M. McFetridge, M.A. Office of the Surgeon General, Department of the Army, Washington, D.C. 1959. xxvi-705 pages. Illustrated. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price $7.50.

The Clonal Selection Theory of Acquired Immunity. By SIR MACFARLANE BURNET. The Abraham Flexner Lectures 1958. Vanderbilt University Press, Nashville. 1959. xiii-209 pages. Price $5.00.

A Doctor Enjoys Sherlock Holmes. By EDWARD J. VAN LIERE. Vantage Press, New York. 1959. 141 pages. Price $3.00.

Doctor Strand. By BORIS SOKOLOFF. Vantage Press, New York. 1960. 205 pages. Price $3.50.

The Cigarette Habit. A Scientific Cure. By ARTHUR KING. Doubleday & Company, Inc., Garden City, New York. 1959. 96 pages. Price $2.00.

A Practical Guide for General Surgical Management. By JULIAN S. STERLING, M.D., Sc.D., Assistant Professor of Surgery, Graduate School of Medicine, University of Pennsylvania; etc. Foreword by Herbert R. Hawthorne, M.D. Vantage Press, New York. 1959. 67 pages. Prices $3.00.

The Teen-Age Years. A Medical Guide for Young People and Their Parents. By ARTHUR ROTH, M.D. Doubleday & Company, Inc., Garden City, New York. 1960. 288 pages. Price $3.95.

The Story of Dissection. By JACK KEVORKIAN, M.D. Philosophical Library, New York. 1959. 80 pages. Illustrated. Price $3.75.

Medieval and Renaissance Medicine. By BENJAMIN LEE GORDON, M.D., F.I.C.S. Philosophical Library, New York. 1959. xii-843 pages. Illustrated. Price $10.00.

Hope Deferred. By JEANETTE SELETZ. Vantage Press, New York. 1959. 546 pages. Price $4.50.

Editorial . . . .



University of Virginia Hospital 1901

The University of Virginia Hospital (1901-1951)

MRS. SARAH S. MATTHEWS of Charlottesville has just published an excellent volume describing the first fifty years of the University of Virginia Hospital. The author was admirably fitted to write an account of the hospital and those who worked in it for she served as Record Librarian in this institution from 1937 until her retirement a few years ago. Few things transpire within the confines of a hospital that do not receive a mental note by those who work within the Record Room. Mrs. Matthews' retentive memory, happy literary style and lively sense of humor combine to make this a very readable book.

Fortunately the writer did not confine her account to the first half of the present century for the question immediately arises in the mind of the reader as to how a medical school, established in 1826, when Professor Robley Dunglison arrived from England, could exist for 75 years without an associated hospital. Mrs. Matthews devoted the first four chapters to a description of this largely didactic period when the medical student's chief contact with the sick was obtained in an out-patient department. This theoretical type of institution necessitated a hospital appointment after graduation from the University. Fortunately the instruction received in those early years during the prolonged medical session, which began prior to the middle of September and continued, with the exception of Christmas day, until the first of August, was of such quality as to make these graduates sought after by the larger Northern hospitals.

A Dispensary was built in 1895/96 where the George Rogers Clark monument now faces Main Street just East of the C & O Railway overpass. The Medical Department's limited budget would not permit the erection of this building until the discolored bricks salvaged from the Annex and Rotunda fire, the preceding fall, were made available for this purpose. Occasional surgical operations were performed in this building but there were no beds available for in-patients and it was necessary to transport post-operatives across Main Street to a rented building where they were housed during their convalescence. The four students who carried the stretcher were known as "Dr. Buckmaster's pallbearers". Here it was that Dr. Paul B. Barringer, who succeeded

Dr. James Lawrence Cabell as Professor of Surgery, enucleated Col. John S. Mosby's left eye which had been injured in a runaway horse accident.

All this was changed when Dr. Barringer, then Chairman of the Faculty, interested several citizens in donating funds for the first and central wing of the present hospital. Lady Nancy Astor, then Mrs. Shaw, was the first substantial contributor when she raised $600 by making a levy on all of her husband's business friends who incautiously boasted about their financial coups in her presence. The site chosen for the hospital was the former faculty pasture where professors were permitted to keep the family cow. The new 25 bed hospital with operating amphitheater, nurses quarters, kitchen, dining room, storage space and offices cost $50,000 and was formally opened on April 17, 1901. The present hospital and the entire Medical Department have grown up about this modest building.

Mrs. Matthews described in detail the various efforts to merge the clinical facilities of the University of Virginia and the Medical College of Virginia. Needed progress was delayed at the University pending the outcome of this contest but when the decision was reached in February, 1922, not to move the Medical School, the way was opened for the rapid expansion which is still taking place in the Department of Medicine. Additions have been added to the hospital with increasing frequency and the size and quality of the faculty, as well as the student body, have kept pace with the growth of the physical plant.

The last 10 chapters are devoted to the faculty, with short biographical notes, the auxiliary services, the administration and, most readable of all, a series of humorous sketches dealing with some of the oddities that graced the local scene during the half century she described. This story deserved to be told and it has been well told by Mrs. Matthews. Fortunate is the institution that has a recorder of her caliber.

HARRY J. WARTHEN, M.D.

Society Activities . . . .

Roanoke Academy of Medicine.

The April meeting of the Academy was held in conjunction with the thirty-third Annual Congress of Gill Memorial Hospital. Following the business, a very excellent scientific program was presented. Dr. J. R. Heller of the National Cancer Institute of Bethesda, Maryland, presented an address on Concepts of Cancer Research. The second paper was by Dr. Alton Ochsner of Oschner Clinic and Foundation Hospital of New Orleans, Louisiana, on Increasing Menace of Cancer of the Lung.

Having these two eminent authorities and erudite speakers on the same program afforded the Academy and the members attending the Spring Congress a delightful scientific meeting.

Dr. William H. Kaufman is president of the Academy and Dr. James G. Snead, secretary-treasurer.

Richmond Academy of Medicine.

The J. Shelton Horsley Memorial Lectureship was held on April 26th. This was the 14th annual lectureship which was established by Dr. Guy W. Horsley in honor of his father. The speaker was Dr. Oscar Creech, Jr., William Henderson Professor of Surgery and Chairman of the Department of Surgery of Tulane University School of Medicine. His subject was Chemotherapy Treatment of Malignancy.

The Fourth District Medical Society

Held its Spring Institute at the Southside Community Hospital, Farmville, on April 5th. Dr. Austin I. Dodson, Jr., and Dr. Solomon Papper, Medical College of Virginia, conducted a symposium on renal disease.

Virginia Pediatric Society.

The Annual meeting of this Society was held at The Greenbrier, White Sulphur Springs, West Virginia, in February. The following officers were elected: President, Dr. O. Watts Booth, Newport News; vice-president, Dr. John T. Walke, Roanoke; and secretary-treasurer, Dr. Gayle G. Arnold, Richmond.

News . . . .

New Members.

Since the list published in the May issue of the Monthly, the following members have been admitted into The Medical Society of Virginia:

Werner Anthony Gergen, M.D., Front Royal
Michael Homa, M.D., Arlington
Solomon Papper, M.D., Richmond
Nicholas George Poulos, M.D., Richmond
George Straughan Schools, M.D., Richmond
Thomas H. Webb, M.D., Portsmouth

Dr. Vincent P. Hollander,

University of Virginia, has been made a lifetime professor of cancer research through a grant from the American Cancer Society. He will do full time research on cancer, his special interest being the hormonal control of tumor growth. This is the first full time cancer research professorship ever granted by the Society. Dr. Hollander is associate professor of internal medicine and assistant professor of biochemistry, in addition to being coordinator and director of the cancer research laboratories at the University.

Dr. Charles W. Scott,

Burkeville, is the recipient of the Douglas Southall Freeman Award for outstanding work in tuberculosis control. He is superintendent and medical director of the Piedmont Sanatorium. The award was presented at the annual meeting of the Virginia Tuberculosis Association in April.

Scientific Exhibit for Clinical Meeting.

Application forms for space in the Scientific Exhibit at the Washington, D. C., Clinical Meeting of the American Medical Association, November 28 to December 1, are now available. They may be procured by writing directly to Charles H. Bramlitt, M.D., Director, Department of Scientific Assembly, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois. Applications close on August 1.

The "Hull" award will be presented for the first time at this meeting to the best exhibit on a scientific subject which has not been previously shown at a medical meeting. The award will consist of a gold medal and an honorarium of $250.00.

Dr. Paul D. Camp,

Richmond, attended the meeting of the Pan American Medical Association in Mexico City. On May 3rd, he presented a paper on Serum Cholesterol Distribution in Subjects of Various Ages and Clinical Conditions.

Officers of Virginia Tuberculosis Association.

Dr. E. C. Drash, Charlottesville, has been named first vice-president of this Association, and Dr. John A. Mapp, Nassawadox, third vice-president.

Dr. Fletcher D. Woodward,

Charlottesville, has been made the first honorary member of the Speech and Hearing Association of Virginia.

Dr. Donald L. Brummer,

Richmond, has been elected president of the Trudeau Society of Virginia. He is medical director of the E. G. Williams Hospital.

The American Cancer Society

Has announced that a grant in the amount of $43,350.00 for research in whole body radiation has been made to the Medical College of Virginia. Part of the grant, $25,000.00, will be used toward the purchase of a two million volt x-ray machine. The balance will be used in research activities carried out with the equipment.

The Medical College is receiving other assistance in the purchase of the equipment, including a substantial sum that has been raised by members of the Virginia Federation of Woman's Clubs. The cost of the equipment is approximately $95,000.00. Construction of facilities to house it will cost an additional $70,000.00, bringing the total project to approximately $165,000.00, of which half has been obtained.

Dr. J. M. Winkfield,

Strasburg, has been elected vice-president of the Board of Directors of the Massanutten Bank.

Dr. Frederick E. Vultee, Jr.,

Has been named chairman of the department of physical medicine and rehabilitation and director of the school of medicine at the Medical College of Virginia. He is now associate director of the Rehabilitation Institute of Chicago and will assume his duties in Richmond on the 15th of July. Dr. Vultee was formerly associate professor of physical medicine and rehabilitation at the College.

Plastic Surgery Program at University.

The plastic surgery program at the University of Virginia School of Medicine has been approved for

residency training by the Tri-Partite Committee of the American Medical Association. This accreditation marks the founding of the first and only approved program of its kind in Virginia. It will enable surgeons to receive thorough training in this specialty, and at the completion of the two-year program, qualify for the American Board of Plastic Surgery examinations.

The division of plastic and maxillofacial surgery was established at the University in 1956 by Dr. Claude C. Coleman, Jr. He is associate professor of plastic surgery and chief of the division and is also director of the Head and Neck Tumor Clinic, which he established in 1958.

Hand-Schüller-Christian Disease.

The cooperation of physicians is requested in a study of eosinophilic xanthomatous granulomatosis, and most specifically Hand-Schüller-Christian disease, being conducted by the Radiation Branch of the National Cancer Institute in the Clinical Center of the National Institutes of Health, Bethesda, Maryland. This study has as its primary purpose a search for therapeutic methods which may favorably affect the course of the disease.

Patients appropriate for this study are those with a histopathological diagnosis consistent with some phase of esoinophilic xanthomatous granulomatosis who have active disease. It is preferable, of course, that such patients not be seriously ill, as this precludes long term studies of effects. In order to minimize the effects of prior treatment, those patients who have not received antifolic-acid, radiation or steroid therapy for at least one month prior to their evaluation shall be considered most appropriate but previously treated patients will be considered for admission.

Physicians interested in the possibility of referring such patients should write or telephone: Dr. Charles G. Zubrod, Clinical Director, National Cancer Institute, Bethesda 14, Maryland (OLiver 6-4000, Ext. 4346); or Dr. J. Robert Andrews, Chief, Radiation Branch, National Cancer Institute, Bethesda 14, Maryland (OLiver 6-4000, Ext. 3351).

For Sale.

Used Picker portable x-ray machine—30 ma. Excellent condition. Contact Appalachia General Hospital, Appalachia, Virginia. (*Adv.*)

Pharmacist,

Experienced in retail and hospital pharmacy, desires to contact doctor(s) with view of establishing ethical pharmacy in clinic. Replies kept in strict confidence. Write #800, care Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

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Obituaries . . . .

Dr. William Meyer,

Prominent physician of Herndon, died following a heart attack on April 5th. He was sixty-eight years of age and a graduate of the Medical College of Virginia in 1918. Dr. Meyer began his practice at Messick and moved to Herndon in 1924. He was active in the civic affairs of his community, having served three terms on the Herndon Town Council, had been a director of the Citizens National Bank, was past president of the Rotary Club and an honorary member of the Arlington Kiwanis Club. Dr. Meyer was a 33rd degree Mason, a past potentate of Kena Temple, and a member of the Virginia Consistory. He held many other offices in the Masons and was well-known in Northern Virginia and throughout the shrine of North America.

Dr. Meyer was twice president of the Fairfax County Medical Society and was an associate member of the District and Arlington Medical Societies. He had been a member of The Medical Society of Virginia for thirty-seven years.

His wife, two sisters and four brothers survive him.

Dr. Churchill Robertson,

Salem, died May 4th, at the age of sixty-two. He graduated from the Medical College of Virginia in 1923. Dr. Robertson had practiced in Roanoke for more than thirty years before his retirement six years ago. He was a member of The Medical Society of Virginia, having joined in 1933.

Dr. Robertson is survived by his wife and two daughters. A brother is Senator A. Willis Robertson of Lexington.

Dr. Friedman.

In the death of Dr. Louis Friedman on February 16, 1960, of coronary thrombosis, this Society and its members lost a good and respected colleague. At the same time, our community suffered the loss of an able practitioner, one who had served well the needs of its people for forty-five years.

Dr. Friedman was born in Lithuania on December 15, 1888. He came to this country at the age of sixteen; and in Baltimore, studied at Deichman Preparatory School, from which he graduated in 1908. He received his Doctorate in Medicine in 1912 at the College of Physicians and Surgeons, which later was incorporated into the University of Maryland. He interned at the Sinai Hospital of Baltimore, and practiced general medicine for two years in that city, before entering the private practice of medicine in Norfolk in 1915.

For many years, he was a senior attending physician at Norfolk General Hospital, and active on its clinic staff. He was a staff member, also, at De Paul and Leigh Memorial Hospitals.

He was a member of this Society, The Medical Society of Virginia, and the American Medical Association.

Many, but not all of his colleagues, were aware of Dr. Friedman's intellectual attainments beyond the field of medicine. He was a devoted and capable student of ancient literature, and spent much of his leisure time in research in this field; especially in its relation to the history and philosophy of medicine.

In the passing of Dr. Louis Friedman from our scene, the Society has experienced the loss of a good friend and co-worker. We extend to Mrs. Friedman and her sons our deepest sympathy in their bereavement.

Be it resolved, then, that this expression of our feeling be read into the minutes of the Norfolk County Medical Society; that a copy be transmitted to Mrs. Friedman; and, further, that a copy be forwarded to the Virginia Medical Monthly for publication.

C. Lydon Harrell, M.D., *Chairman*
Robert D. Glasser, M.D.
Bernard Lidman, M.D.

Dr. Smith.

The Mid-Tidewater Medical Society on February 26, 1960, lost by the death of Dr. James Smith one of its most loyal members, one of its founders and its first president.

Dr. Smith's faithful attendance on the meetings of the Society, at which he contributed sound counsel and pertinent comments wil be sorely missed. His versatile interests and keen mind kept him abreast of the rapidly changing field of medical practice in a truly commendable fashion.

Forty years ago, Dr. Smith took practical steps in community wide prophylactic immunizations when these measures were generally unknown in rural areas and he continued through his whole career progressive in thought and deed. His kindness and skill will be long remembered in Gloucester County where he served the people for more than half a century.

We feel a deep sense of loss in his passing and desire to extend to his family and friends our sympathy.

Therefore Be It Resolved, that a copy of these memorials be spread on the minutes of the Mid-Tidewater Society, a copy be sent to the Virginia Medical Monthly, and a copy be sent to his family.

Adopted at a regular meeting of the Mid-Tidewater Medical Society on July 26, 1960.

M. H. Harris, M.D., *Secretary*

Dr. Lawrence.

On Sunday, March 13, 1960, in the company of his wife and Dr. and Mrs. Reuben Simms, Dr. Bruce Lawrence drove to his cottage on the Rappahannock River, to check for possible winter damage or other trouble. On entering the cottage he noticed severe chest pain, which increased rapidly and was self-diagnosed as a coronary thrombosis. In spite of emergency treatment, Dr. Lawrence passed away in a short time.

Bruce Lawrence was born in Richmond, on October 17, 1899. His father was Alonzo Robert Lawrence and his mother was Julia Lechler Lawrence. He attended the Richmond public schools and took his premedical education at the University of Richmond. He graduated in 1923 from Hahnemann Medical School, Philadelphia, and served his internship at Hahnemann Hospital there.

In July 1924 he began the general practice of medicine in Richmond. For many years he was associated with Retreat for the Sick Hospital in the capacity of anesthetist.

Dr. Lawrence was active in the Richmond Academy of General Practice from the time of its inception, and in 1959 he served as its President. He was also active in the Virginia Academy of General Practice, having served on the Board of Directors and on numerous committees. He was a member of the Richmond Academy of Medicine, The Medical Society of Virginia, the American Medical Association, and the American Academy of General Practice.

For ten years prior to June, 1959, he served on the State Board of Medical Examiners.

He was a member of the staff of the Richmond Memorial Hospital and Retreat for the Sick Hospital; of the courtesy staff of Stuart Circle and St. Luke's Hospitals.

Bruce Lawrence was a quiet, unassuming, dedicated and friendly man, who instilled confidence and affection in his patients. Few doctors have been more beloved by those whom they have treated. He was loyal to his friends, and though strong in his convictions, he was always ready to hear both sides of a question. He was wise in his judgment, patient, kind, compassionate and tolerant. He frequently would forego pleasure or vacation when he felt a sick patient might need him.

The Richmond Academy of Medicine realizes that it has lost a capable and valued member and friend, and extends to his wife and family its deepest sympathy.

The committee proposes that this resolution be adopted and incorporated in the minutes of the Richmond Academy of Medicine, and that a copy of this resolution be sent to his widow and to the Virginia Medical Monthly.

William A. Young, M.D.
Reuben Simms, M.D.
Russell G. McAllister, M.D., *Chairman*

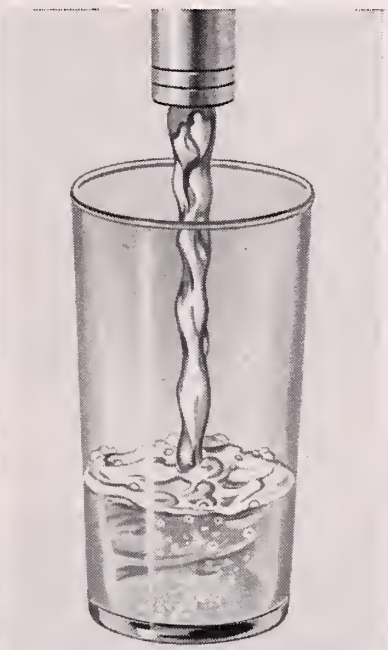
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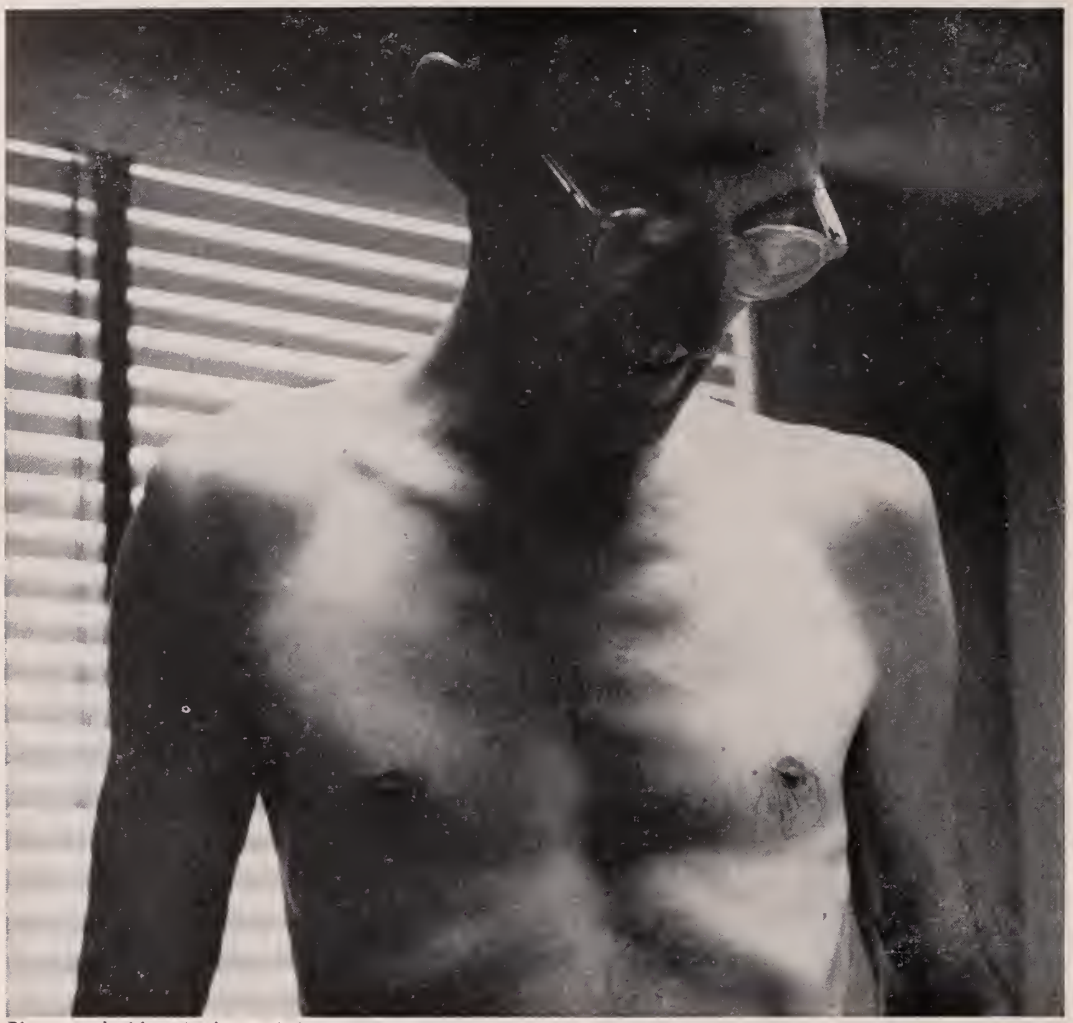
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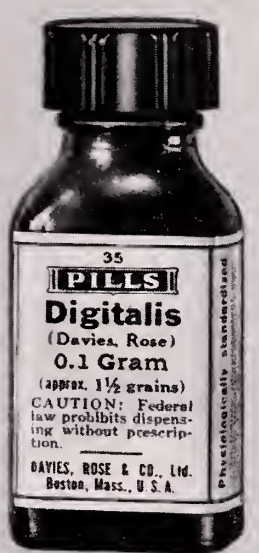
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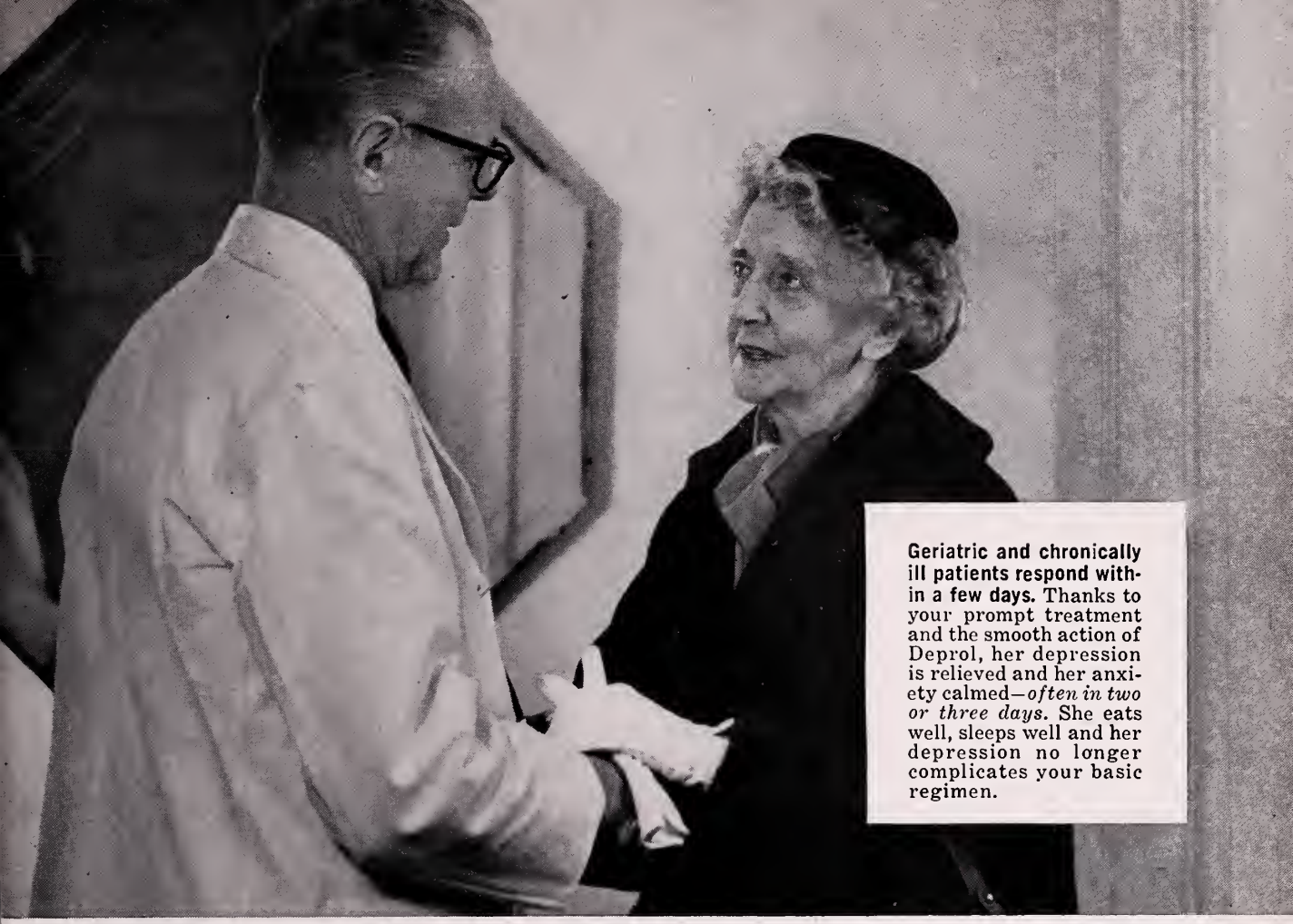
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Recent JAMA editorial statement clarifies the current controversy about dietary fats

Excerpted from the March 12, 1960, issue of The Journal of The American Medical Association:

"It is accepted generally that specific alteration in the diet will lower the concentration of cholesterol in the blood. The most effective results to date have been achieved by increasing consumption of polyunsaturated fatty acids, particularly linoleic acid. However, indefinitive and conflicting information has left much to the imagination of some food processors. Some of the largest vegetable oil processors in the United States have implied in advertisements that the cholesterol level can be lowered merely by adding polyunsaturated fatty acids to the diet. This selling campaign has created confusion among lay people, making it increasingly important that the physician clarify for his patients the conditions under which changes in the diet will be effective.

The patient should understand that if he increases his consumption of polyunsaturated fatty acids without reducing his intake of other fats, little is gained save for additional calories which could lead to obesity. A particular regimen will be effective only if polyunsaturated fatty acids are responsible for an appreciable percentage of the total fat calories. That is, they must replace rather than supplement some of the saturated fats and oils already in the diet.

* * *

Some manufacturers cite the "iodine number" of a fat or oil as evidence of the unsaturated fatty acid content of their product. This number is not a reliable indicator of therapeutic value because it measures monounsaturated and polyunsaturated fatty-acid content at the same time. A monounsaturated acid, like oleic, takes up two iodine atoms but does not affect the cholesterol concentration of the blood. A polyunsaturated acid, like linoleic, takes up four iodine atoms. In a product containing large amounts of oleic acid and small amounts of linoleic acid, the iodine number is nearly the same as it would be for a product containing little oleic acid and a modest amount of linoleic acid. Cottonseed oil has an iodine number of 110 and corn oil a number of 127; yet they each have about the same amount of linoleic acid.

* * *

Low-fat diets will not reduce the concentration of circulating cholesterol and lipoproteins as effectively as will diets containing an adequate percentage of polyunsaturated fatty acids. Weight-reduction regimens are basically low in fat, and if a lowered cholesterol level is necessary, planning must be done to maintain the proper ratio of saturated to unsaturated fats."

* * *

Herbert Pollack, M.D.
Associate Professor of Clinical Medicine
Postgraduate Medical School
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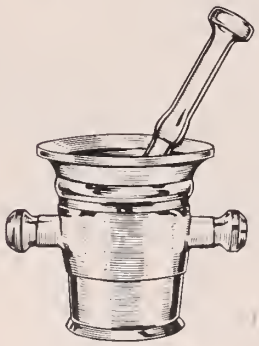
Linoleic acid glycerides (poly-unsaturated)	50-55%
Oleic acid glycerides (mono-unsaturated)	16-20%
Total unsaturated	70-75%
Palmitic, stearic and myristic glycerides (saturated)	25-30%
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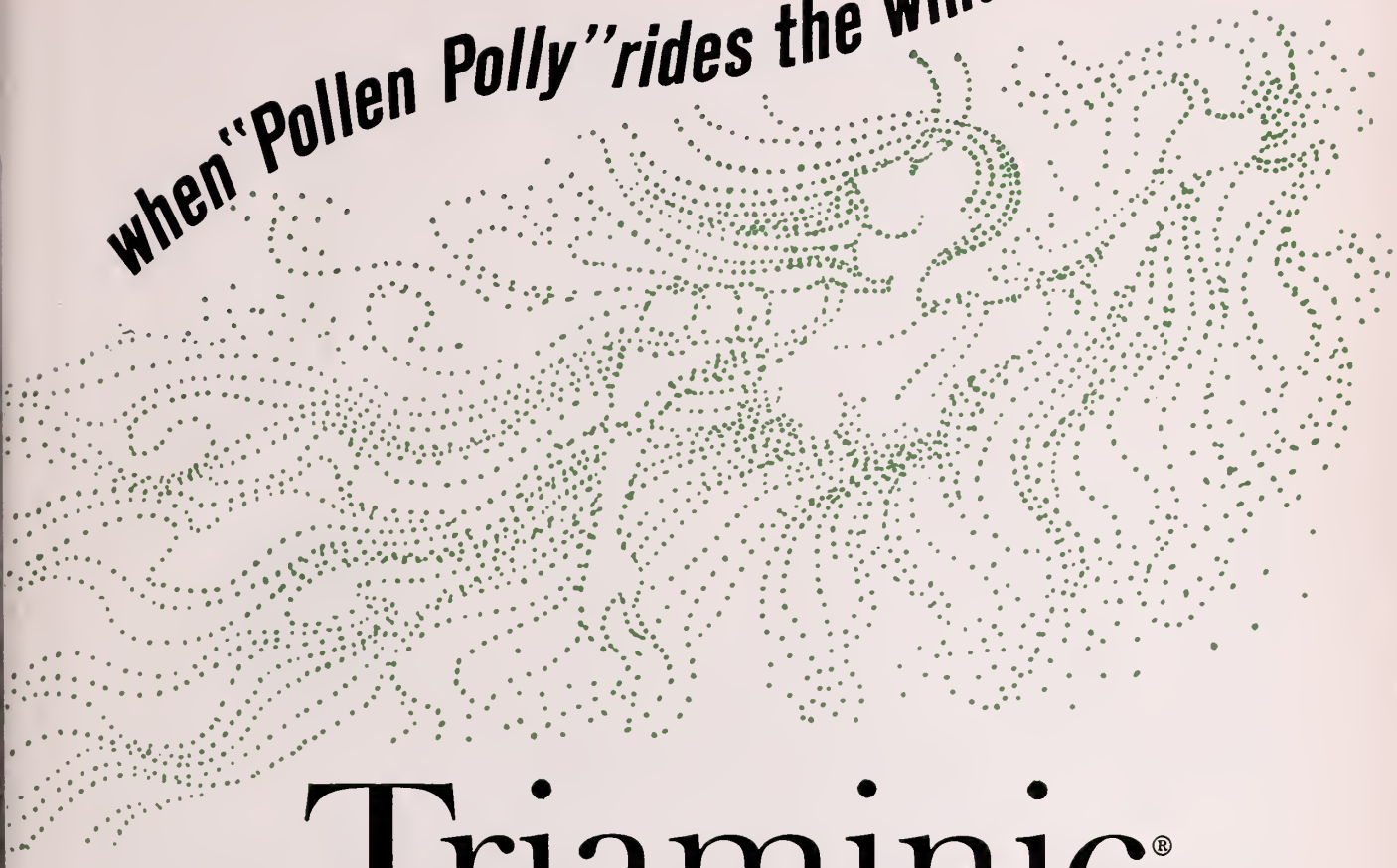
Component and Other Medical Societies in Virginia

(Officers and Others are Requested to Notify the **Monthly** of Changes)

SOCIETY	PRESIDENT	SECRETARY	TIME OF MEETING
Accomack County	D. F. Fletcher, Jr., Horsey	J. C. Doughty, Onancock	Quarterly
Albemarle County	G. S. Fitz-Hugh, Charlottesville	W. Copley McLean, Charlottesville	Monthly
Alexandria	B. C. Jones, Jr., Alexandria	W. J. Brennan, Alexandria	Monthly
Alleghany-Bath Counties	J. P. Hileman, Millboro	George N. Chucker, Clifton Forge	Bi-Monthly
Amherst-Nelson Counties	Lyddane Miller, Amherst	J. F. Thaxton, Tye River	Inactive
Arlington County	R. L. Norment, Arlington	Howard O. Mott, Arlington	Monthly
Augusta County	J. L. Davis, Waynesboro	Beverly Loesch, Waynesboro	5 times a year
Bedford County	S. L. Rucker, Moneta	O. B. Darden, Jr., Bedford	Quarterly
Botetourt County	M. S. Stinnett, Buchanan	E. L. Coffey, Buchanan	
Buchanan-Dickenson Counties	Robert Baxter, Grundy	J. S. Richardson, Grundy	
Charlotte County	Stuart Wilson Tuggle, Keysville	Thomas Watkins, Drakes Branch	
Culpeper County	J. B. Jones, Culpeper	James P. Baker, Culpeper	Monthly
Danville-Pittsylvania	J. W. Milam, Danville	G. B. Updike, Danville	Monthly
Fairfax County	J. E. O'Brien, Falls Church	Frances Ayres, Falls Church	Monthly
Fauquier County	E. H. Ashby, Jr., Remington	James L. Dellinger, Warrenton	Monthly
Floyd County	J. C. Rutrough, Willis	F. C. Bedsaul, Floyd	
Fourth District	Ray Moore, Jr., Farmville	J. D. Mason, Jr., Petersburg	Quarterly
Fredericksburg	L. F. Moss, Fredericksburg	J. E. Grimes, Fredericksburg	Quarterly
Halifax County	G. L. Wilkinson, South Boston	L. W. Roberts, South Boston	
Hampton	Helen Dorsey, Hampton	L. M. Lieberman, Hampton	5 times a year
Hanover County	J. D. Hamner, Jr., Ashland	Claude K. Kelly, Mechanicsville	
Hopewell	C. H. Dougherty, Hopewell	W. P. Youngblood, Hopewell	Monthly
James River	W. A. Pennington, Buckingham	J. H. Yeatman, Fork Union	Quarterly
Lee County	B. H. Owens, Rose Hill	H. A. Kinser, Pennington Gap	Quarterly
Loudoun County	S. S. Morrison, Leesburg	J. W. Gibson, Middleburg	
Louisa County	Griffith Daniel, Louisa	A. R. Southall, Louisa	Only call meetings
Lynchburg	G. B. Craddock, Lynchburg	L. F. Somers, Lynchburg	Monthly
Medical Society of Virginia	Allen Barker, Roanoke	R. I. Howard, Richmond	Oct. 9-12, Va. Beach
Mid-Tidewater	A. W. Lewis, Jr., Aylett	M. H. Harris, West Point	Quarterly
Newport News	J. Q. Hatten, Newport News	A. C. Stanton, Newport News	Monthly except June & July
Norfolk County	W. W. Taylor, Jr., Norfolk	Meyer Krischer, Norfolk	Monthly
Northampton County	W. F. Bernart, Nassawadox	W. S. Burton, Nassawadox	Monthly
Northern Neck	Paul Pearson, Warsaw	Harvey Goode, Jr., Kilmarnock	
Northern Virginia	Bradford Bennett, Winchester	Robert York, Berryville	
Orange County	H. C. McCoy, Gordonsville	R. S. LeGarde, Orange	Monthly
Patrick-Henry Counties	H. H. Price, Martinsville	E. T. McNamee, Stuart	Quarterly
Portsmouth	T. E. Jones, Portsmouth	M. C. Glynn, Jr., Portsmouth	Monthly except July & August
Princess Anne County	Fitzhugh Mayo, Va. Beach	A. B. Frazier, Virginia Beach	Monthly
Prince William County	Alvin Connor, Manassas	M. L. Nafsinger, Woodbridge	Indefinite
Richmond	R. V. Terrell, Richmond	Patty Boatwright, Richmond	Semi-Monthly
Roanoke	W. H. Kaufman, Roanoke	J. G. Snead, Roanoke	Monthly
Rockbridge County	John Yaeger, Lexington	K. J. Fox, Fairfield	
Rockingham County	H. P. Deyerle, Harrisonburg	C. E. Craun, Harrisonburg	Quarterly
Russell County	R. F. Gillespie, Lebanon	W. A. Davis, Dante	
Scott County	W. L. Griggs, Jr., Gate City	G. C. Honeycutt, Jr., Gate City	
Smyth County	C. O. Finne, Saltville	C. G. Thompson, Marion	Quarterly
Southwestern Virginia	J. G. Cox, Hillsville	M. A. Johnson, III, Roanoke	Semi-annually
Tazewell County	W. D. Damron, Richlands	Rufus Brittain, Tazewell	Bi-monthly
Tri-County	J. W. Lambdin, Franklin	Irwin H. McNeely, Franklin	Quarterly
Va. Acad. Gen. Practice	Boyd Payne, Staunton	S. F. Driver, Roanoke	May 11-14, 1961
Am. Col. Chest Phys.	G. C. Pearson, Blue Ridge	C. C. Smith, Catawba	October
Va. Sec. Amer. Col. Phys.	William Parson, Charlottesville	William H. Harris, Jr., Richmond	Twice a year
Va. Diabetes Assoc.	W. R. Jordan, Richmond	L. B. Sheppard, Richmond	Twice a year
Va. Ob-Gyn. Soc.	W. D. Suggs, Richmond	Brock D. Jones, Jr., Norfolk	Twice a year
Va. Orthopedic Soc.	Wm. Deyerle, Richmond	F. B. Carpenter, Richmond	Twice a year
Va. Pediatric Soc.	O. W. Booth, Newport News	G. G. Arnold, Richmond	Twice a year
Va. Peninsula Acad. Medicine	G. S. Grier, III, Newport News	T. W. Sale, Hampton	Monthly
Va. Neuropsychiatric Soc.	Frederick Woodson, Norfolk	Howard Ashbury, Staunton	Semi-annually
Va. Radiological Soc.	C. D. Smith, Roanoke	F. A. Kearney, Hampton	Twice a year
Va. Soc. Anesthesiology	Patricia Andrews, Charlottesville	Campbell Harris, Jr., Richmond	Semi-annually
Va. Soc. Internal Med.	M. M. Pinckney, Rchmond	T. N. Hunnicutt, Jr., Newport News	Twice a year
Va. Soc. of O. L. & O.	M. P. Smith, Richmond	M. K. Humphries, Jr., Charlottesville	Twice a year
Va. Soc. of Pathology	David Smith, Charlottesville	George J. Carroll, Suffolk	Quarterly
Va. Soc. Plastic & Reconstr. Surg.	C. C. Coleman, Jr., Charlottesville	Leroy Smith, Richmond	
Va. Surgical Soc.	B. W. Rawles, Jr., Richmond	Carrington Williams, Jr., Richmond	Yearly in Spring
Va. Urological Soc.	Ralph Landes, Danville	G. W. Link, Petersburg	October
Washington County	Harry Hayter, Abingdon	J. C. Placak, Abingdon	Monthly
Williamsburg-James City	B. H. Bailey, Yorktown	B. I. Bell, Jr., Williamsburg	
Wise County	G. C. Snead, Derby	William Schmidt, Norton	
Wythe-Bland Counties	W. R. Chitwood, Wytheville	C. B. Hughes, Wytheville	Quarterly



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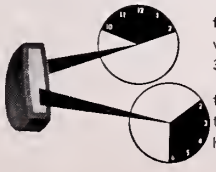
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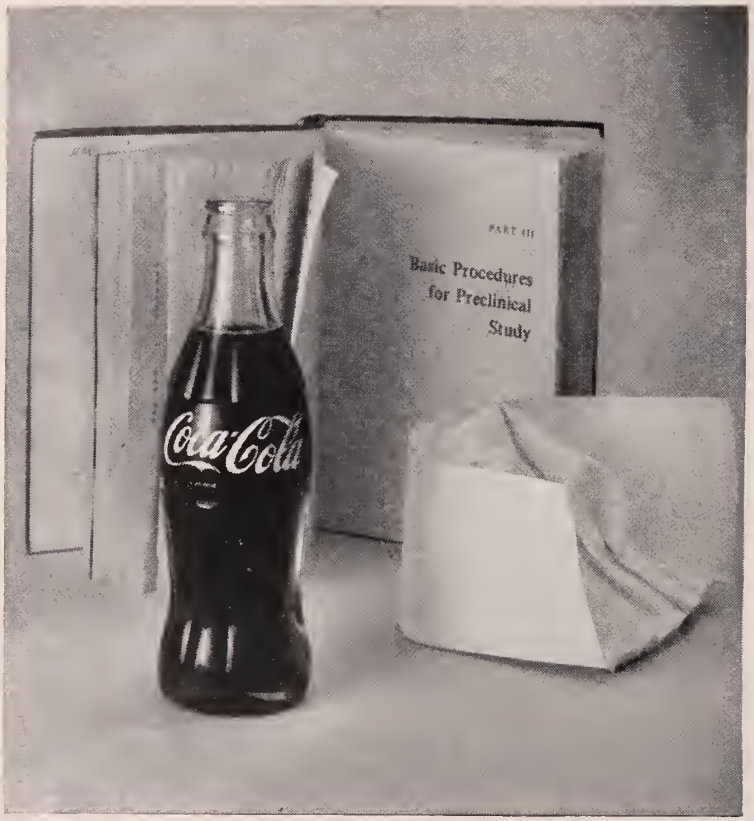
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The next meeting of the Virginia Board of Medical Examiners will be held in the John Marshall Hotel, Richmond, Virginia June 13, 1960. The examination will be held in the same hotel June 14-17 inclusive.

All applications and other documents pertaining to the examination or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 20, 1960. The Secretary of the Board is Dr. K. D. Graves, 631 1st Street, S.W., Roanoke, Virginia.

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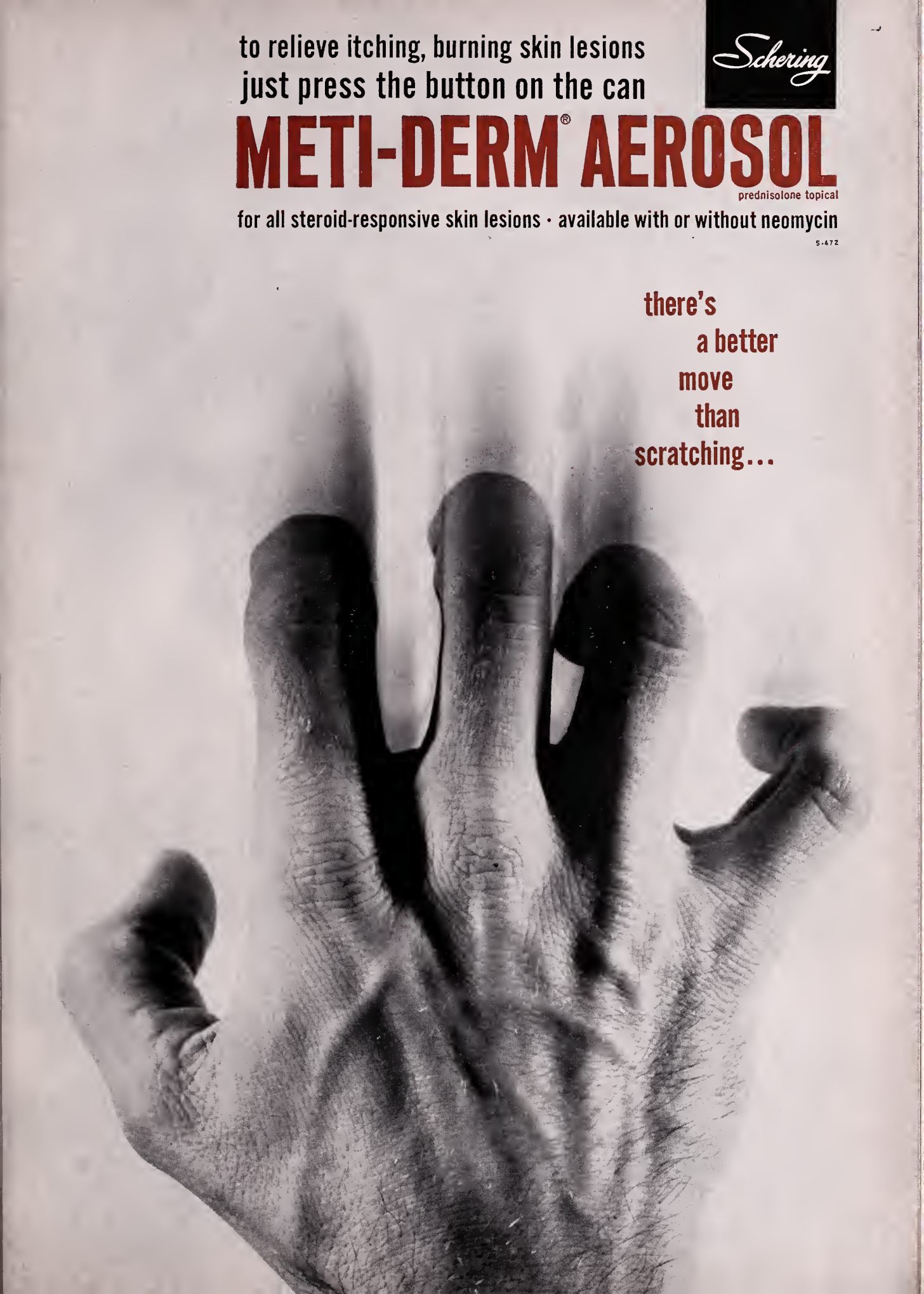
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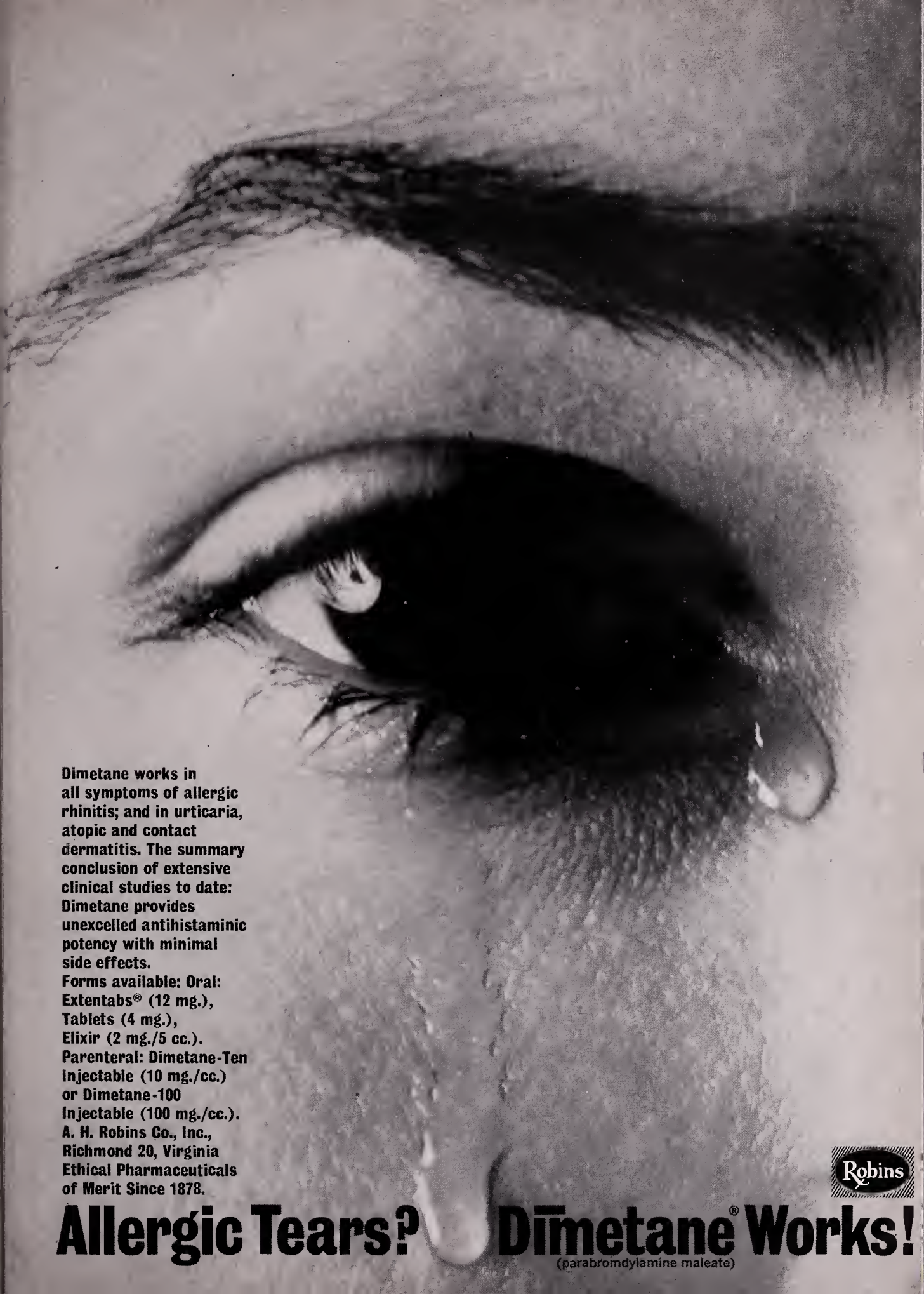
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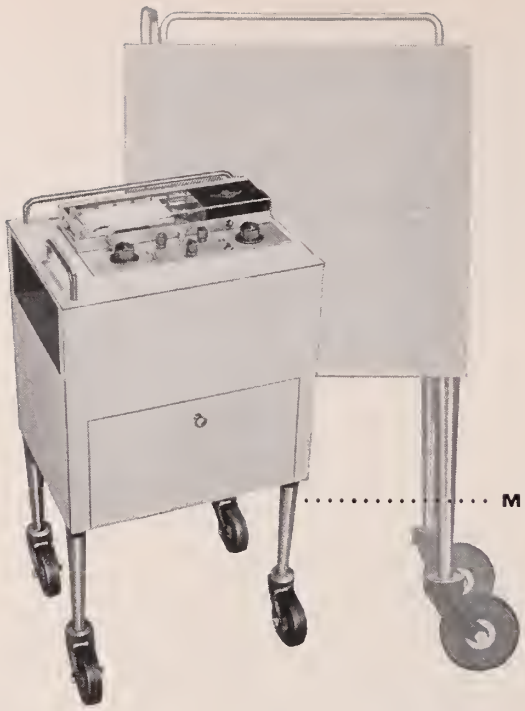


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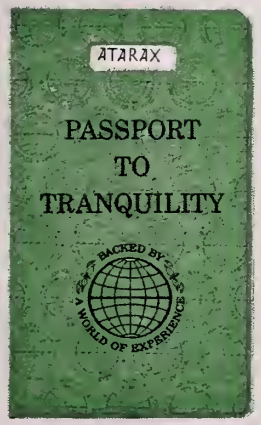
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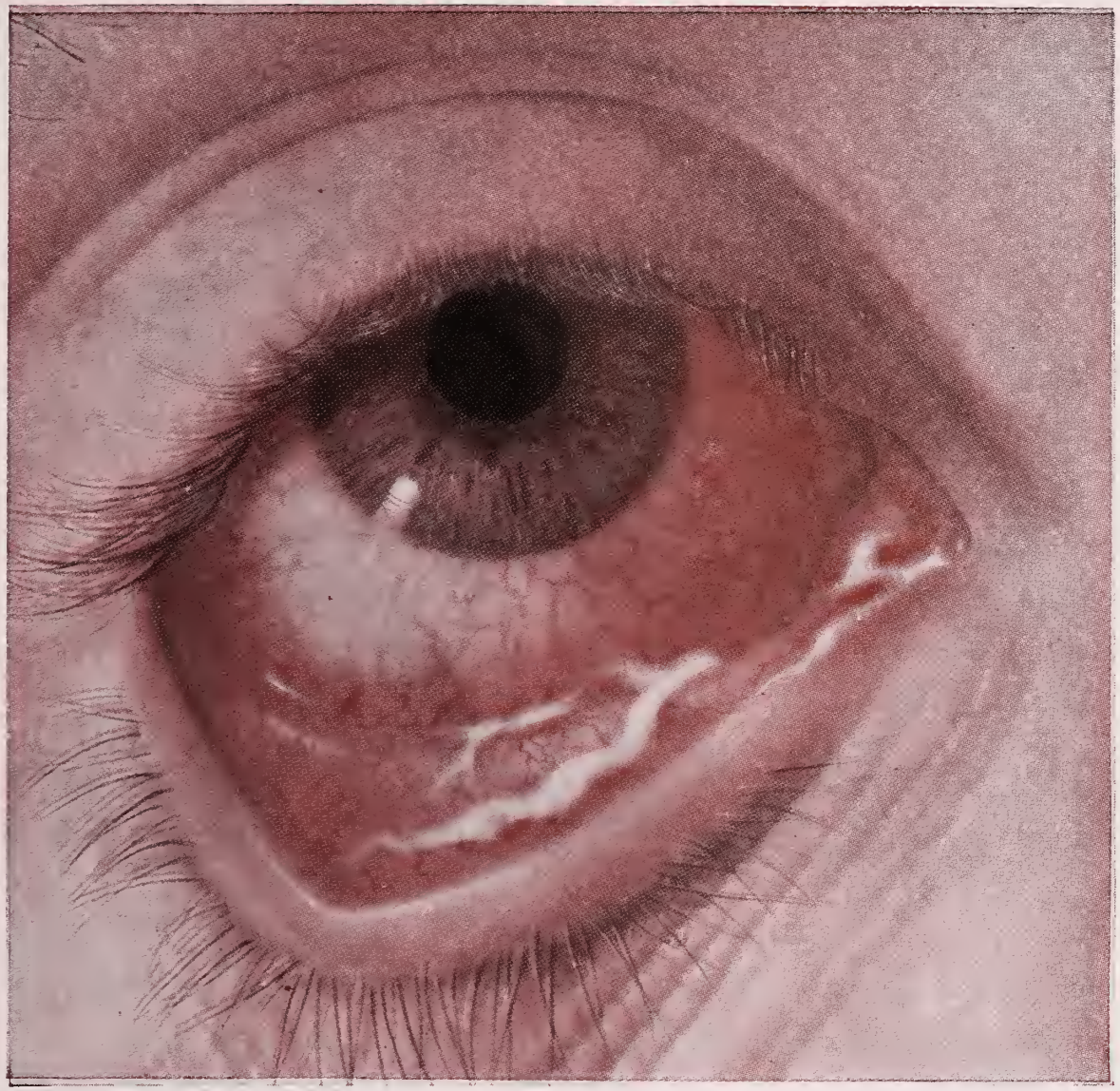


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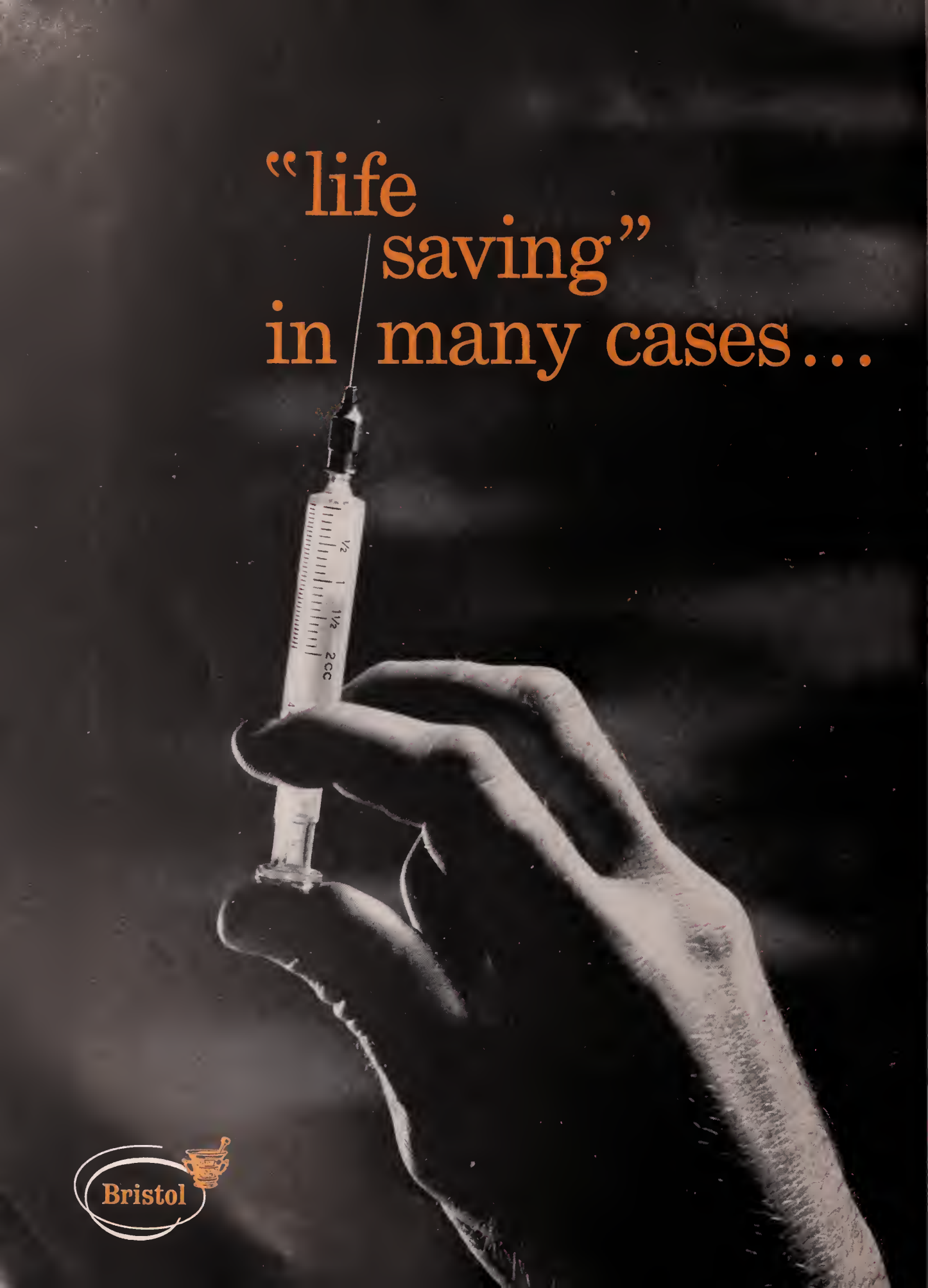
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INDEX TO ADVERTISERS

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Ames Company, Inc. Inside Back Cover
Appalachian Hall 46
Arnar Stone Lab., Inc. 57
Brayten 13
Bristol 14-15, 78-79
Burroughs-Wellcome Co. 16, 76
Ciba 23, 52-53
Coca-Cola 70
Component Societies 67
Davies, Rose & Company, Limited 53
Desitin Chemical Co. 40
Dyer, David A., Insurance 12
Eli Lilly and Company 42
Gill Memorial Eye, Ear and Throat Hospital, Inc. 46
Geigy 38
Jefferson, A. G. 56
Johnston-Willis Hospital 44
Jones and Vaughan 7
Lederle 24-25, 36, 44, 51, 56, 80, 81
Lorillard 8
Mayrand, Inc. 10
Medicine in Virgina 56, 70
Merck Sharp & Dohme 5, 77
Parke, Davis & Company Second Cover-3
People's Service Drug Stores 62
Physician's Products Co. 39
Pitman-Moore Co. 82
Plyler's Nursing Home, Mrs. 48
Richmond Eye Hospital—Richmond Ear, Nose and Throat Hospital 45
Richmond Hotels Incorporated 56
Riverside Convalescent Home 45
Robins, A. H. Company 34-35, 59, 73
Roerig 26, 75
Rucker, Marvin Pierce 80
Saint Albans 48
Sanborn Company 74
Sardeau, Inc. 22
Saunders, W. B., Company 9
Scheiing 6, 28-29, 41, 71
Schieffeln & Co. 51
Searle 43
Smith-Dorsey 68-69
Smith Kline & French Laboratories Back Cover
Squibb 17
St. Elizabeth's Hospital 47
St. Luke's Hospital 50
St. Paul-Western Insurance Companies 54
State Board of Medical Examiners, The 70
Stuart Circle Hospital 47
Terrace Hill Nursing Home 44
Today's Health 70
Tucker Hospital, Inc. 50
United States Brewers Foundation 58
U. S. Vitamin Corp. 32-33
Vale Chemical Co. 31, 72
Valentine Company, Inc. 51
Wallace Laboratories 18-21, 27, 37, 55
Wesson Oil 60-61
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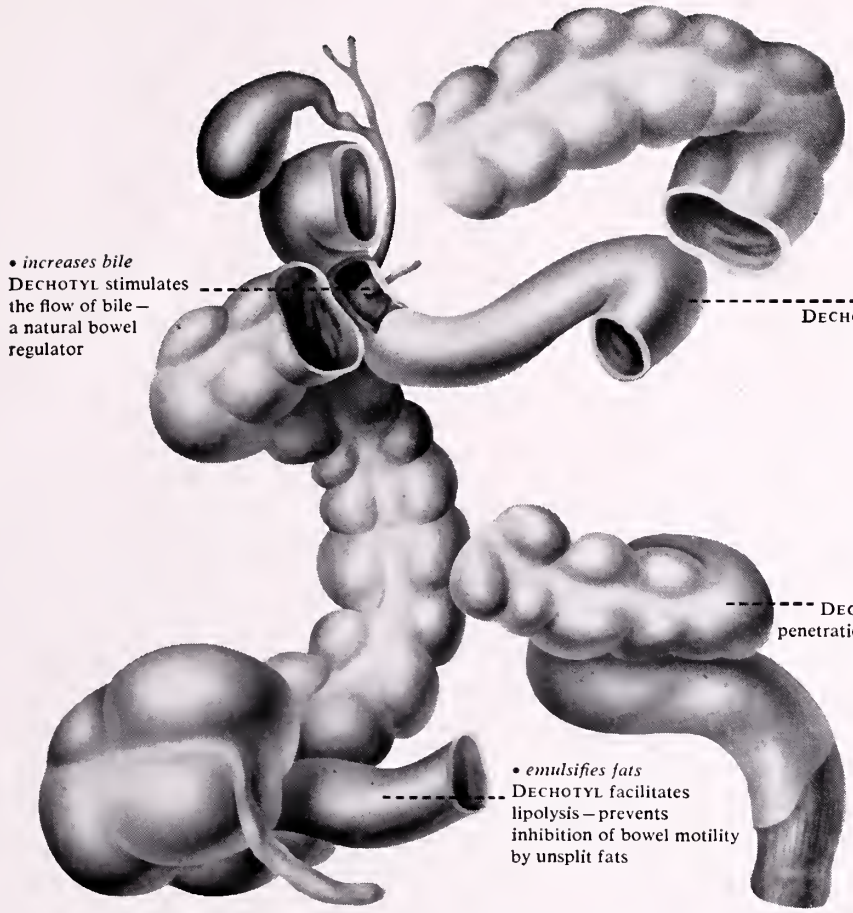


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